**WEAR CONTAMINATION FLUID CONDITION** 

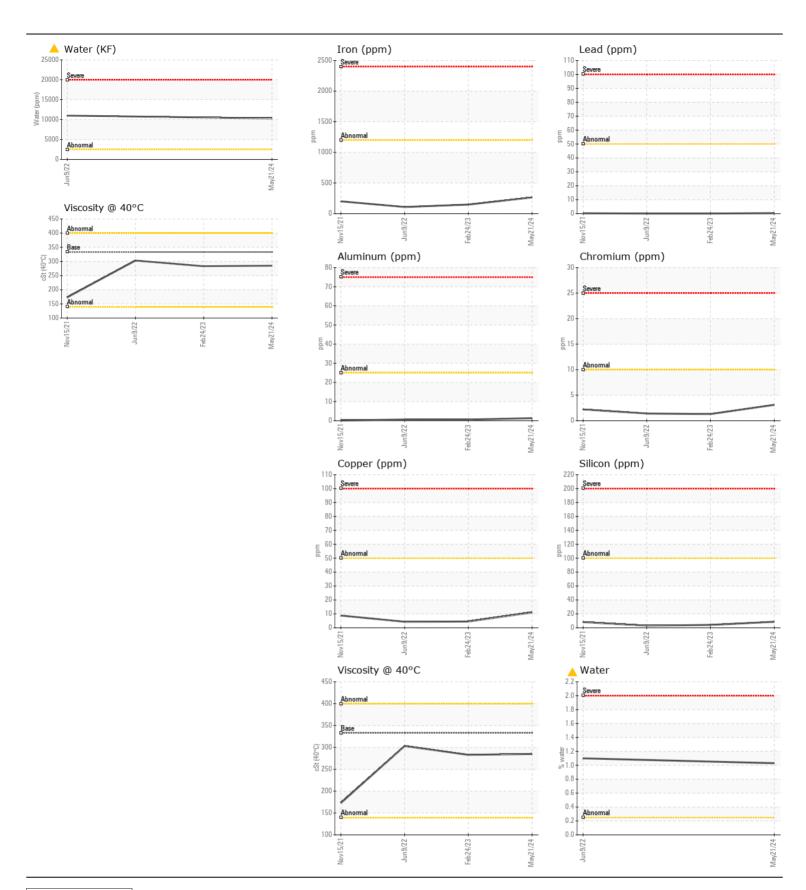
**NORMAL ABNORMAL NORMAL** 



## [716824 SYNERGY] **VOLVO ECR235 314203**

**Swing Drive** 

VOLVO PREMIUM GEAR OIL 8		· · · · · · · · ·	MAL)				
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		VCP450719	VCP395987	VCP337036
	Sample Date		Client Info		21 May 2024	24 Feb 2023	09 Jun 2022
	Machine Age	hrs	Client Info		4253	3136	2375
	Oil Age	hrs	Client Info		0	1000	1000
	Filter Age	hrs	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Not Changd	Not Changd
	Sample Status				ABNORMAL	NORMAL	SEVERE
WEAR	Iron	ppm	ASTM D5185m	>1200	263	147	107
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>10	3	1	1
	Nickel	ppm	ASTM D5185m	>10	<1	0	0
	Titanium	ppm	ASTM D5185m		<1	0	<1
	Silver	ppm	ASTM D5185m		<1	0	1
	Aluminum	ppm	ASTM D5185m	>25	1	<1	<1
	Lead	ppm	ASTM D5185m	>50	<1	0	0
	Copper	ppm	ASTM D5185m		11	4	4
	Tin	ppm	ASTM D5185m	>10	0	0	0
	Vanadium	ppm	ASTM D5185m		<1	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION  Appearance is milky. There is a high concentration of water present in the oil.	Silicon	ppm	ASTM D5185m	>100	9	4	3
	Potassium	ppm	ASTM D5185m	>20	1	<1	0
	Water	- /					A 4 4 0
	vvalei	%	ASTM D6304	>0.25	<b>1.03</b>		<b>1.10</b>
	ppm Water	% ppm	ASTM D6304 ASTM D6304	>0.25 >2500	▲ 1.03 ▲ 10300		▲ 1.10 ▲ 11000
	ppm Water	ppm	*Visual  *Visual	>2500	<u> </u>	NONE	▲ 11000 NONE NONE
	ppm Water Silt	ppm scalar	*Visual *Visual *Visual	>2500 NONE NONE NONE	▲ 10300 NONE NONE NONE	NONE NONE NONE	▲ 11000 NONE NONE NONE
	ppm Water Silt Debris Sand/Dirt Appearance	ppm scalar scalar scalar scalar	*Visual  *Visual  *Visual  *Visual	>2500 NONE NONE NONE NORML	A 10300 NONE NONE NONE MILKY	NONE NONE NONE NORML	▲ 11000 NONE NONE NONE
	ppm Water Silt Debris Sand/Dirt Appearance Odor	ppm scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual	>2500 NONE NONE NONE NORML	A 10300 NONE NONE NONE NONE MILKY NORML	NONE NONE NONE NORML	▲ 11000 NONE NONE NONE MILKY NORML
	ppm Water Silt Debris Sand/Dirt Appearance	ppm scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual	>2500 NONE NONE NONE NORML	A 10300 NONE NONE NONE MILKY	NONE NONE NONE NORML	▲ 11000 NONE NONE NONE
FLUID CONDITION	ppm Water Silt Debris Sand/Dirt Appearance Odor	ppm scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual	>2500 NONE NONE NONE NORML	A 10300 NONE NONE NONE NONE MILKY NORML	NONE NONE NONE NORML	▲ 11000 NONE NONE NONE MILKY NORML
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm scalar scalar scalar scalar scalar	*Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual	>2500 NONE NONE NORML NORML >0.25	▲ 10300 NONE NONE NONE MILKY NORML ▲ 0.2%	NONE NONE NONE NORML NORML NEG	▲ 11000 NONE NONE NONE MILKY NORML ▲ 0.2%
FLUID CONDITION  The condition of the oil is acceptable for the time in service.	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm scalar scalar scalar scalar scalar scalar	ASTM D6304  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  ASTM D5185m  ASTM D5185m	>2500 NONE NONE NORML NORML >0.25	▲ 10300 NONE NONE NONE ● MILKY NORML ▲ 0.2%	NONE NONE NONE NORML NORML NEG	▲ 11000 NONE NONE NONE MILKY NORML ▲ 0.2%
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum	ppm scalar scalar scalar scalar scalar scalar ppm	*Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	>2500 NONE NONE NORML NORML >0.25 1111 0.0 0.9	▲ 10300 NONE NONE NONE MILKY NORML ▲ 0.2%  2 127 0 6	NONE NONE NONE NORML NORML NEG  0 86 0 5	▲ 11000 NONE NONE NONE NONE MILKY NORML  1 97 0 2
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese	ppm scalar scalar scalar scalar scalar ppm ppm	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>2500 NONE NONE NORML NORML >0.25 1111 0.0 0.9 0.0	▲ 10300 NONE NONE NONE NONE  MILKY NORML  ▲ 0.2%  2 127 0 6 3	NONE NONE NONE NORML NORML NEG  0 86 0 5	▲ 11000 NONE NONE NONE NONE  MILKY NORML
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm scalar scalar scalar scalar scalar ppm ppm ppm	*Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	>2500 NONE NONE NORML NORML >0.25 1111 0.0 0.9 0.0 39	▲ 10300 NONE NONE NONE NONE  MILKY NORML  ▲ 0.2%  2 127 0 6 3 30	NONE NONE NONE NORML NORML NEG  0 86 0 5 2 29	▲ 11000 NONE NONE NONE NONE NONE  MILKY NORML  ▲ 0.2%  1 97 0 2 2 14
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	*Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *ASTM D5185m  ASTM D5185m	>2500 NONE NONE NORML NORML >0.25 1111 0.0 0.9 0.0 39 93	▲ 10300 NONE NONE NONE NONE  MILKY NORML	NONE NONE NONE NORML NORML NEG  0 86 0 5 2 29 59	▲ 11000 NONE NONE NONE NONE MILKY NORML
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>2500 NONE NONE NONE NORML NORML >0.25  111 0.0 0.9 0.0 39 93 920	▲ 10300 NONE NONE NONE NONE  MILKY NORML  ▲ 0.2%  2 127 0 6 3 30 72 958	NONE NONE NONE NORML NORML NEG  0 86 0 5 2 29 59 867	<ul> <li>▲ 11000</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>MILKY</li> <li>NORML</li> <li>▲ 0.2%</li> <li>1</li> <li>97</li> <li>0</li> <li>2</li> <li>2</li> <li>14</li> <li>83</li> <li>684</li> </ul>
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D6304  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  *Visual  ASTM D5185m  ASTM D5185m	>2500 NONE NONE NORML NORML >0.25 1111 0.0 0.9 0.0 39 93 920 104	▲ 10300 NONE NONE NONE NONE  MILKY NORML  ▲ 0.2%  2 127 0 6 3 30 72 958 81	NONE NONE NONE NORML NORML NEG  0 86 0 5 2 29 59 867 76	▲ 11000 NONE NONE NONE NONE NONE  MILKY NORML  ▲ 0.2%  1 97 0 2 2 14 83 684 53
	ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>2500 NONE NONE NORML NORML >0.25 1111 0.0 0.9 0.0 39 93 920 104 20179	▲ 10300 NONE NONE NONE NONE  MILKY NORML  ▲ 0.2%  2 127 0 6 3 30 72 958	NONE NONE NONE NORML NORML NEG  0 86 0 5 2 29 59 867	<ul> <li>▲ 11000</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>MILKY</li> <li>NORML</li> <li>▲ 0.2%</li> <li>1</li> <li>97</li> <li>0</li> <li>2</li> <li>2</li> <li>14</li> <li>83</li> <li>684</li> </ul>





Certificate L2367

Laboratory Sample No. Lab Number

: VCP450719 : 06192541

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

Received **Tested** Unique Number : 11049293 Diagnosed : 28 May 2024

: 30 May 2024

: 30 May 2024 - Don Baldridge

Test Package: MOB 1 (Additional Tests: KF)

\* - 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)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

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