



Area Ascendum Machinery Machine Id VOLVO EC220E EX-7 (S/N 310467) Component

Right Travel

VOLVO PREMIUM GEAR OIL 85W-140 GL-5 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

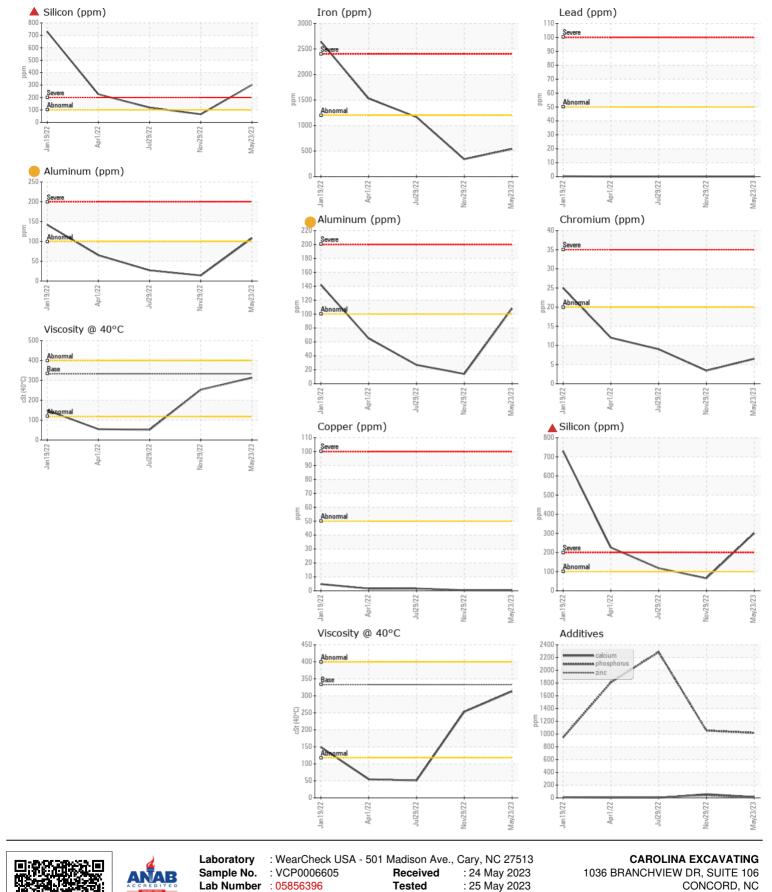
Elemental levels of silicon (Si) and aluminum (AI) indicate aluminasilicate (coarse dirt) ingress.

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP0006605	VCP0004384	VCP0002110
Sample Date		Client Info		23 May 2023	29 Nov 2022	29 Jul 2022
Machine Age	hrs	Client Info		4959	4503	3999
Oil Age	hrs	Client Info		456	504	3999
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	None	N/A
Sample Status				SEVERE	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>1200	540	340	1166
Chromium	ppm	ASTM D5185m	>20	6	3	9
Nickel	ppm	ASTM D5185m	>5	۰ <1	0	1
Titanium	ppm	ASTM D5185m		6	1	2
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>100	108	14	27
Lead	ppm	ASTM D5185m	>50	0	0	0
Copper	ppm	ASTM D5185m	>50	<1	<1	2
Tin	ppm	ASTM D5185m	>5	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	MODER	MODER	NONE
W into World						
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		*Visual ASTM D5185m	NONE >100	NONE	NONE 65	NONE
Yellow Metal	scalar ppm ppm					
Yellow Metal Silicon	ppm	ASTM D5185m	>100	4 301	65	1 18
Yellow Metal Silicon Potassium	ppm	ASTM D5185m ASTM D5185m	>100 >20	▲ 301 9	65 <1	▲ 118 0
Yellow Metal Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>100 >20 >0.25	▲ 301 9 NEG	65 <1 NEG	 118 0 NEG
Yellow Metal Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>100 >20 >0.25 NONE	 301 9 NEG NONE 	65 <1 NEG NONE	 118 0 NEG NONE
Yellow Metal Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>100 >20 >0.25 NONE NONE	 301 9 NEG NONE NONE 	65 <1 NEG NONE NONE	 118 0 NEG NONE NONE
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual	>100 >20 >0.25 NONE NONE NONE	 301 9 NEG NONE NONE NONE 	65 <1 NEG NONE NONE NONE	 118 0 NEG NONE NONE NONE
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>100 >20 >0.25 NONE NONE NONE NORML	 301 9 NEG NONE NONE NONE NORML 	65 <1 NONE NONE NONE NORE	 118 0 NEG NONE NONE NONE NORML
Yellow Metal 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	>100 >20 >0.25 NONE NONE NONE NORML NORML	 301 9 NEG NONE NONE NORE NORML NORML 	65 <1 NEG NONE NONE NONE NORML NORML	 118 0 NEG NONE NONE NONE NORML NORML
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>100 >20 >0.25 NONE NONE NONE NORML NORML	 301 9 NEG NONE NONE NORML NORML NEG 	65 <1 NEG NONE NONE NORML NORML NEG	 118 0 NEG NONE NONE NORML NORML NEG
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>100 >20 >0.25 NONE NONE NORML NORML >0.25	 301 9 NEG NONE NONE NORML NORML NEG 2 	65 <1 NEG NONE NONE NORML NORML NEG 2	 118 0 NEG NONE NONE NORML NORML NEG 0
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar gpm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>100 >20 >0.25 NONE NONE NORML >0.25	 301 9 NEG NONE NORE NORML NORML NEG 2 172 	65 <1 NEG NONE NONE NORML NORML NEG 2 156	 118 0 NEG NONE NONE NORML NORML NEG 0 251
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NONE NORML NORML >0.25	 301 9 NEG NONE NONE NORML NORML NORML NEG 2 172 0 	65 <1 NEG NONE NONE NORML NORML NEG 2 156 0	 118 0 NEG NONE NONE NORML NORML NORML NEG 0 251 0
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORML NORML >0.25 1111 0.0	 301 9 NEG NONE NONE NORML NORML NEG 2 172 0 <1 	65 <1 NEG NONE NONE NORML NORML NEG 2 156 0 2	 118 0 NEG NONE NONE NORML NORML NEG 0 251 0 2
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORME NORML >0.25 111 0.0 0.9 0.0	 301 9 NEG NONE NORE NORML NORML NEG 2 172 0 <1 3 	65 <1 NEG NONE NONE NORML NORML NEG 2 156 0 2 2 2	 118 0 NEG NONE NONE NORML NORML NEG 0 251 0 2 6
Yellow Metal 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 ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NONE NORML >0.25 111 0.0 0.9 0.0 39	 301 9 NEG NONE NONE NORML NORML NEG 2 172 0 <1 3 5 	65 <1 NEG NONE NONE NORML NORML NEG 2 156 0 2 2 156 0 2 2 156	 118 0 NEG NONE NONE NORML NORML NEG 0 251 0 2 6 0
Yellow Metal 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 ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NONE NORML NORML >0.25 1111 0.0 0.9 0.0 39 93	 301 9 NEG NONE NONE NORML NORML NEG 2 172 0 <1 3 5 14 	65 <1 NEG NONE NONE NORML NORML NEG 2 156 0 2 156 0 2 2 156 0 2 2 58	 118 0 NEG NONE NONE NORML NORML NEG 0 251 0 2 6 0 2
Yellow Metal 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 ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORME NORML >0.25 111 0.0 0.9 0.0 39 93	 301 9 NEG NONE NORE NORML NORML NEG 2 172 0 <1 3 5 14 1018 	65 <1 NEG NONE NONE NORML NORML NEG 2 156 0 2 2 156 0 2 2 6 58 58 1056	 118 0 NEG NONE NONE NORML NORML NEG 0 251 0 2 6 0 2 2286

Submitted By: CHARLIE CANIPE



: 26 May 2023 - Don Baldridge Unique Number : 10485751 Diagnosed Test Package : MOBCE Contact: KEVIN LADGERWOOD Certificate L2367 kevin@carlinaexcavation.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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