

Machine Id VOLVO EC380EL 311273 Component Rear Left Final Drive Fluid VOLVO PREMIUM GEAR OIL 80W-90 GL-5 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Gear wear is indicated.

CONTAMINATION

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

FLUID CONDITION

The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP433666	VCP371320	VCP379117
Sample Date		Client Info		14 Jun 2024	06 Feb 2023	10 Aug 2022
Machine Age	hrs	Client Info		6605	5125	4625
Oil Age	hrs	Client Info		0	0	1000
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>500	4 527	436	▲ 1375
Chromium	ppm	ASTM D5185m	>10	4 32	4	8
Nickel	ppm	ASTM D5185m	>10	5	1	<1
Titanium	ppm	ASTM D5185m		13	4	5
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	<mark>)</mark> 220	0100	95
Lead	ppm	ASTM D5185m	>25	0	0	<1
Copper	ppm	ASTM D5185m	>50	10	<1	2
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		*) /1		NONE	NONE	NONE
Yellow Metal	scalar	"VISUAI	NONE	NONE	NONE	NONE
Yellow Metal Silicon	scalar	ASTM D5185m	>75	1611	400	194 NONE
Yellow Metal Silicon Potassium	ppm	ASTM D5185m	>75 >20	NONE ▲ 1611 82	▲ 400 35	▲ 794 37
Yellow Metal Silicon Potassium Water	scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method	>75 >20 >0.2	▲ 1611 82 NEG	▲ 400 35 NEG	▲ 794 37 NEG
Yellow Metal Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >0.2 NONE	NONE	A 400 35 NEG LIGHT	NONE 794 37 NEG NONE
Yellow Metal Silicon Potassium Water Silt Debris	scalar ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >0.2 NONE NONE	NONE ▲ 1611 82 NEG NONE NONE	▲ 400 35 NEG LIGHT NONE	 794 37 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	>75 >20 >0.2 NONE NONE NONE	NONE ▲ 1611 82 NEG NONE NONE	▲ 400 35 NEG LIGHT NONE NONE	 ▲ 794 37 NEG NONE NONE NONE
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance	scalar ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE	NONE 1611 82 NEG NONE NONE NONE NORE	▲ 400 35 NEG LIGHT NONE NONE	 794 37 NEG NONE NONE NONE NONE NORML
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	scalar ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE NORML NORML	NONE 1611 82 NEG NONE NONE NONE NORE NORML NORML	▲ 400 35 NEG LIGHT NONE NONE NORML NORML	 794 37 NEG NONE NONE NONE NORML NORML
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	scalar ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NORML NORML >0.2	NONE 1611 82 NEG NONE NONE NONE NORML NEG	▲ 400 35 NEG LIGHT NONE NONE NORML NORML NEG	 794 37 NEG NONE NONE NONE NORML NORML NEG
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	scalar ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE NORML NORML >0.2	NONE 1611 82 NEG NONE NONE NORE NORML NEG	▲ 400 35 NEG LIGHT NONE NONE NORML NORML NEG	 794 37 NEG NONE NONE NORML NORML NEG
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	scalar ppm ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2	NONE 1611 82 NEG NONE NONE NONE NORML NORML NEG 46	▲ 400 35 NEG LIGHT NONE NORML NORML NEG 11	 NONE 794 37 NEG NONE NONE NORML NORML NEG 22 22
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	scalar ppm ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NORML >0.2 379	NONE 1611 82 NEG NONE NONE NORML NORML NEG 46 100	 ▲ 400 35 NEG LIGHT NONE NORML NORML NEG 11 99 	 NONE 794 37 NEG NONE NONE NORML NORML NEG 22 20
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	scalar ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2 379 0.0	 NONE 1611 82 NEG NONE NONE NORML NORML NEG 46 100 2 	 ▲ 400 35 NEG LIGHT NONE NORML NORML NEG 11 99 0 	 794 37 NEG NONE NONE NORML NORML NEG 22 20 2
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	scalar ppm ppm scalar 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	>75 >20 >0.2 NONE NONE NORML NORML >0.2 379 0.0	 NONE 1611 82 NEG NONE NONE NORML NORML NEG 46 100 2 5 	 ▲ 400 35 NEG LIGHT NONE NORML NORML NORML NEG 11 99 0 <1 	 794 37 NEG NONE NONE NORML NORML NORML NEG 22 20 2 1
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	scalar ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2 379 0.0 0.8 0.0	 NONE 1611 82 NEG NONE NONE NORML NORML NEG 46 100 2 5 28 	▲ 400 35 NEG LIGHT NONE NORML NORML NEG 11 99 0 <14	 NONE 794 37 NEG NONE NONE NORML NORML NEG 22 20 2 1 8
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	scalar ppm scalar scalar scalar scalar scalar scalar 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	>75 >20 >0.2 NONE NONE NORML NORML >0.2 379 0.0 0.8 0.0 31	 NONE 82 NEG NONE NONE NORML NORML NEG 46 100 2 5 28 99 	 ▲ 400 35 NEG LIGHT NONE NORML NORML NEG 11 99 0 <1 4 35 	 794 37 NEG NONE NONE NORML NORML NEG 22 20 2 1 8 50
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar ppm scalar 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 ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2 379 0.0 0.8 0.0 31 38	 NONE NEG NONE NONE NONE NORML NORML NEG 46 100 2 5 28 99 501 	 ▲ 400 35 NEG LIGHT NONE NORML NORML NEG 11 99 0 <1 4 35 172 	 794 37 NEG NONE NONE NORML NORML NEG 22 20 2 1 8 50 1340
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar 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 ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2 379 0.0 0.8 0.0 31 38 1077	 NONE 1611 82 NEG NONE NONE NORML NORML NEG 46 100 2 5 28 99 501 1714 	 ▲ 400 35 NEG LIGHT NONE NORML NORML NORML NEG 11 99 0 <1 4 35 172 1591 	 NONE 37 NEG NONE NONE NORML NORML NEG 22 20 2 1 8 50 1340 733
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc	scalar ppm scalar 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 ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2 379 0.0 0.8 0.0 31 38 1077 46	NONE 1611 82 NEG NONE NONE NONE NORML NORML NORML 100 2 5 28 99 501 1714 44	 ▲ 400 35 NEG LIGHT NONE NORML NORML NEG 11 99 0 <1 4 35 172 1591 14 	 NONE 794 37 NEG NONE NONE NORML NORML NEG 22 20 2 1 8 50 1340 733 751
Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Sand/Dirt Appearance Odor Emulsified Water Sodium Barium Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	scalar ppm scalar scalar scalar scalar scalar scalar ppm ppm 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 ASTM D5185m ASTM D5185m	 >75 >20 >0.2 NONE NONE NONE NORML NORML >0.2 379 0.0 0.8 0.0 31 38 1077 46 23526 	 NONE 1611 82 NEG NONE NONE NORML NORML NEG 46 100 2 5 28 99 501 1714 44 28407 	 NONE 35 NEG LIGHT NONE NORML NORML NEG 11 99 0 <1 4 35 172 1591 14 16835 	 NONE 794 37 NEG NONE NORML NORML NEG 22 20 20 21 8 50 1340 733 751 7675

Contact/Location: LARRY SCHRADE - LEOMAD



 Certificate L2367
 Test Package
 : MOB 1
 Cont

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

 * - 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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