

WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL



SPM660661-10]
Machine Id
VOLVO EC200 314412

Diesel Engine

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

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
TEOSIMIERO ATION	Sample Number		Client Info		VCP431846	VCP376216	
Resample at the next service interval to monitor.	Sample Date		Client Info		03 Feb 2024	04 Aug 2022	
	Machine Age	hrs	Client Info		2089	974	
	Oil Age	hrs	Client Info		0	1500	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		N/A	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	ATTENTION	
WEAR	Iron	ppm	ASTM D5185m	>100	17	17	
WEAR	Chromium	ppm	ASTM D5185m		<1	<1	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	
	Titanium	ppm	ASTM D5185m	710	0	<1	
	Silver	ppm	ASTM D5185m	>2	0	0	
	Aluminum	ppm	ASTM D5185m		7	5	
	Lead	ppm	ASTM D5185m		0	<1	
	Copper	ppm	ASTM D5185m		2	2	
	Tin	ppm	ASTM D5185m		- <1	<1	
	Vanadium	ppm	ASTM D5185m	7.10	0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m		6	5	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	<1	9	
	Fuel		WC Method		<1.0	0.4	
	Water		WC Method	>0.1	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844		0.2	0.2	
	Nitration	Abs/cm	*ASTM D7624		6.1	7.4	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	17.9	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		<1	0	
	Boron	ppm	ASTM D5185m	2.5	388	98	
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		<1	2	
	Molybdenum	ppm	ASTM D5185m	0.7	85	35	
	Manganese	ppm	ASTM D5185m		<1	<1	
	Magnesium	ppm	ASTM D5185m	256	392	269	
	Calcium	ppm	ASTM D5185m	2057	1310	1845	
	Phosphorus	ppm	ASTM D5185m	935	1038	797	
	Zinc	ppm	ASTM D5185m	1223	1198	955	
	Sulfur	ppm	ASTM D5185m	4079	3134	3189	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	11.3	
	Base Number (BN)	mg KOH/g	ASTM D2896	10	7.4	8.0	
	Visc @ 100°C	cSt	ASTM D445	15.0	13.0	▲ 11.4	





Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : VCP431846 Lab Number : 06087914

Unique Number: 10875359

Received **Tested** Diagnosed

: 13 Feb 2024 : 14 Feb 2024

: 14 Feb 2024 - Wes Davis

8418 PALM RIVER ROAD TAMPA, FL US 33619

Contact: KENNY HANEY khaney@flaglerce.com T: (813)630-0077

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

F: (813)630-2233