WEAR CONTAMINATION FLUID CONDITION

ABNORMAL NORMAL NORMAL



VOLVO A45G 590 (S/N 352994)

Diesel Engine

Sample Number Client Info SAB0002998 VCP41276 VCD VCD	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Contractive action is recommended at this time. Resample at the next service interval to monitor. Sample date Name Name	Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next	Sample Number		Client Info		ASC0002908		VCP425948
Machine Age Instruction		Sample Date		Client Info		29 Feb 2024	14 Nov 2023	28 Jun 202
Oil Age		Machine Age	hrs	Client Info		5752	4860	4181
Oil Changed Cilent Info Changed Change		Oil Age	hrs	Client Info		500	0	0
Filter Changed Sample Status		Filter Age	hrs	Client Info		500	0	0
Normal N		Oil Changed		Client Info		Changed	Changed	Changed
Valve wear is indicated. All other component wear rates are normal. Iron ppm ASTM 05185m >20 1 0		Filter Changed		Client Info		Changed	Changed	Changed
Valve wear is indicated. All other component wear rates are normal.		Sample Status				ABNORMAL	NORMAL	NORMAL
Valve wear is indicated. All other component wear rates are normal.	WFAR	Iron	ppm	ASTM D5185m	>100	14	12	9
Nickel ppm ASTM D5185m 2 10 2 1 1 1 1 1 1 1 1 1								<1
Titanium ppm ASTM D5185m >2 0 0 0 0 0 0 0 0 0						<u> </u>		2
Aluminum ppm ASTM D5185m >25 3 2 1		Titanium		ASTM D5185m		0	0	0
Aluminum ppm ASTM D5185m >25 3 2 1		Silver	ppm	ASTM D5185m	>2	0	0	0
Copper		Aluminum	ppm	ASTM D5185m	>25	3	2	2
Tin		Lead	ppm	ASTM D5185m	>40	2	1	<1
Vanadium ppm ASTM D5185m Visual NONE NO		Copper	ppm	ASTM D5185m	>330	3	16	2
White Metal Yellow Metal Yellow Metal Yellow Metal Scalar Visual NONE NONE NONE NONE NONE NONE NONE NON		Tin	ppm	ASTM D5185m	>15	1	<1	<1
Yellow Metal Scalar Visual NONE NONE NONE		Vanadium	ppm	ASTM D5185m		0	0	0
Silicon ppm ASTM D5185m >25 5 3 4 5 5 6 6 6 6 6 6 6 6		White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium	CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	5	3	4
Water		Potassium	ppm	ASTM D5185m	>20	<1	0	1
Glycol WC Method NEG NEG Soot % % 'ASTM D7844 >3		Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Soot %		Water		WC Method	>0.2	NEG	NEG	NEG
Nitration Abs/cm		Glycol		WC Method		NEG	NEG	NEG
Sulfation Abs/.imm		Soot %	%	*ASTM D7844	>3	0.5	0.6	0.4
Silt scalar *Visual NONE NONE NONE		Nitration	Abs/cm				10.1	8.6
Debris Scalar *Visual NONE NORML								19.6
Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML								NONE
Appearance Scalar *Visual NORML NORM								NONE
Codor Scalar *Visual NORML NORML Emulsified Water Scalar *Visual >0.2 NEG NEG NEG								NONE
Emulsified Water scalar *Visual >0.2 NEG NEG								NORMI
Sodium ppm ASTM D5185m >216 2 2 0								NEG
Boron ppm ASTM D5185m 250 2 <1 4		Emaiomoa Wator						1120
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service. Barium ppm ASTM D5185m 10 0 0 0 0 0 0 0 0					010	2	2	0
oil. The condition of the oil is acceptable for the time in service. Molybdenum ppm ASTM D5185m 100 68 61	FLUID CONDITION		• • • • • • • • • • • • • • • • • • • •					4
Manganese ppm ASTM D5185m <1		Boron	ppm	ASTM D5185m	250	2	<1	4
Magnesium ppm ASTM D5185m 450 1022 1062 Calcium ppm ASTM D5185m 3000 1182 1214 Phosphorus ppm ASTM D5185m 1150 1126 1161 Zinc ppm ASTM D5185m 1350 1321 1307	The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	2 0	<1 0	0
Calcium ppm ASTM D5185m 3000 1182 1214 Phosphorus ppm ASTM D5185m 1150 1126 1161 Zinc ppm ASTM D5185m 1350 1321 1307	The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	2 0 68	<1 0 61	0 74
Phosphorus ppm ASTM D5185m 1150 1126 1161 Zinc ppm ASTM D5185m 1350 1321 1307	The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	2 0 68 <1	<1 0 61 <1	0 74 <1
Zinc ppm ASTM D5185m 1350 1321 1307	The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	2 0 68 <1 1022	<1 0 61 <1 1062	0 74 <1 1071
!!	The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	2 0 68 <1 1022 1182	<1 0 61 <1 1062 1214	0 74 <1 1071 1238
Sulfur ppm ASTM D5185m 4250 3286 3330 3	The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	2 0 68 <1 1022 1182 1126	<1 0 61 <1 1062 1214 1161	0 74 <1 1071

Oxidation

Visc @ 100°C cSt

16.0

6.9

12.7

16.9

6.3

12.9

Abs/.1mm *ASTM D7414 >25

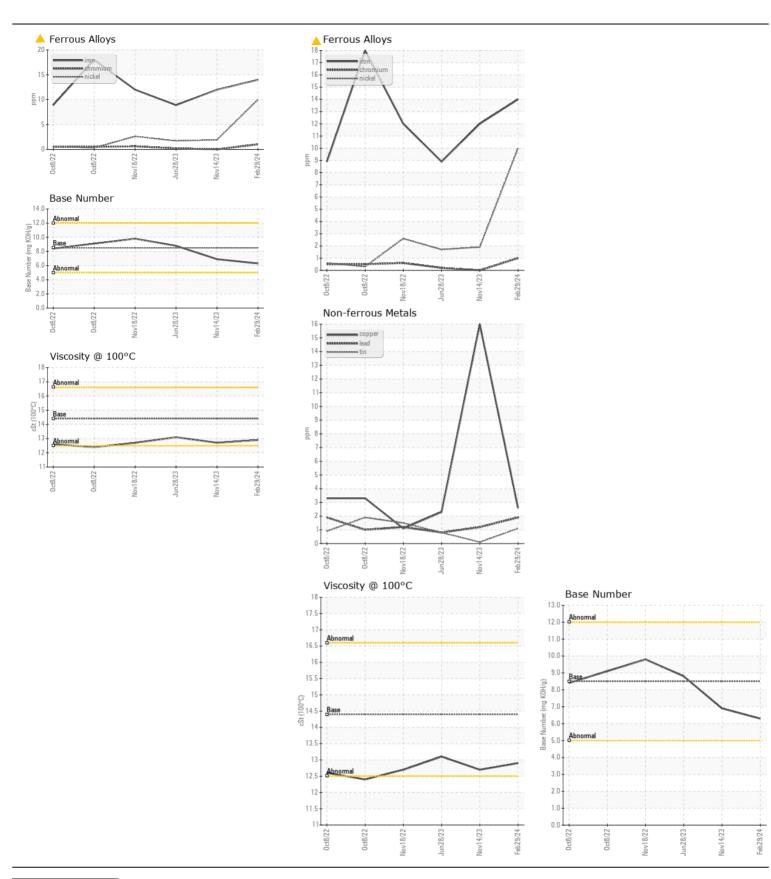
ASTM D445 14.4

Base Number (BN) mg KOH/g ASTM D2896 8.5

15.1

8.8

13.1







Certificate L2367

Report Id: VOLVO8769 [WUSCAR] 06121400 (Generated: 03/20/2024 15:39:11) Rev: 1

Laboratory Sample No.

Lab Number : 06121400 Unique Number : 10930233

Test Package : CONST (Additional Tests: TBN)

: ASC0002908 **Tested** Diagnosed

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 18 Mar 2024 : 19 Mar 2024

: 20 Mar 2024 - Don Baldridge

117 - ASCENDUM MACHINERY INC - GREENVILLE

2002 N GREENE ST GREENVILLE, NC US 27834

F: (704)494-8197

Contact: ALLEN WILLIAMS

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. allen.williams@ascendummachinery.com T:

Contact/Location: ALLEN WILLIAMS - VOLVO8769