

WEAR NORMAL CONTAMINATION NORMAL **FLUID CONDITION** NORMAL

Machine Id VOLVO A45G 13416 (S/N 752174)

Diesel Engine

onen

DIESEL ENGINE OIL SAE 30 (--- GAL)

Beample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. Sample Number Sample Date Client Info 14 May 2021 08 Apr 2024 19 Fe Old Age hrs Client Info 1774 19 Se 660 0	ECOMMENDATION	Test						
Bample Aumber Client Info ASC000177 ASC00177 Bample Date Client Info 14 May 2024 08 Apr 2024 19 Fe Sample Date Client Info 1717 536 0 Oil Age hrs Client Info 1714 536 0 Oil Changed Client Info N/A N/A Chance Sample Status NORMAL NORMAL Astrono NORMAL Astrono Mickel ppm Astrono 11 18 2 2 4 3 Titanum ppm Astrono 1 <td< th=""><th></th><th>1001</th><th>UOM</th><th>Method</th><th>Limit/Abn</th><th>Current</th><th>History1</th><th>History2</th></td<>		1001	UOM	Method	Limit/Abn	Current	History1	History2
brand, type, and viscosity of the oil on your next sample. Sample Date and wachine Age Filter Age Inter Age hrs Client Info 1174 536 0 Oil Age Filter Age hrs Client Info 0		Sample Number		Client Info		ASC0006117	ASC0008778	ASC0008635
Machine Age Ins Client into 1710 1192 666 Oil Age hrs Client Info 0 <td< th=""><th rowspan="2"></th><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>14 May 2024</th><th>08 Apr 2024</th><th>19 Feb 2024</th></td<>		Sample Date		Client Info		14 May 2024	08 Apr 2024	19 Feb 2024
Filter Age hrs Client Info 0 0 0 0 OI Changed Client Info N/A N/A Changed Client Info N/A N/A Changed Sample Status Chromium ppm ASTM DS185m >100 11 18 2 All component wear rates are normal. Iron ppm ASTM DS185m >20 <1 1 1 Nickel ppm ASTM DS185m >20 <1 1 1 1 Nickel ppm ASTM DS185m >20 <1 2 5		Machine Age	hrs	Client Info		1710	1192	656
Oil Changed Filter Changed Sample Status Client Info N/A N/A Changed NORMAL N/A Changed NORMAL N/A N/A Changed NORMAL N/A N/A Changed NORMAL N/A N/		Oil Age	hrs	Client Info		1174	536	0
Filter Changed Sample Status Client Info Norman N/A NORMAL N/A ABN All component wear rates are normal. from ppm ASTM D5186m >20 2 4 3 3 4 1 0 3 26 14 0 3 26 14 2 2 1 1 0 0 3 26 14 0 0 3 26 14 0 0 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Filter Age	hrs	Client Info		0	0	0
Sample Status NORMAL NORMAL ABM WEAR Iron ppm ASTM D5165m >100 11 18 2 All component wear rates are normal. Nickel ppm ASTM D5165m >20 <1 1 1 1 Nickel ppm ASTM D5165m >20 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0		Oil Changed		Client Info		N/A	N/A	Changed
WEAR Iron ppm ASTM D5185m >100 11 18 22 All component wear rates are normal. Dromium ppm ASTM D5185m >20 <1 0 5 1 0 5 1 0 5 1 <th></th> <th>Filter Changed</th> <th></th> <th>Client Info</th> <th></th> <th>N/A</th> <th>N/A</th> <th>Changed</th>		Filter Changed		Client Info		N/A	N/A	Changed
All component wear rates are normal. Chromium ppm ASTM D5185m >20 <1		Sample Status				NORMAL	NORMAL	ABNORMAL
All component wear rates are normal. Chromium ppm ASTM D5185m >20 <1	/EAR	Iron	mag	ASTM D5185m	>100	11	18	27
All component wear rates are normal. Nickel ppm ASTM D5185m >2 2 4 3 Titanium ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >2 2 3 4 Lead ppm ASTM D5185m >2 2 3 4 Lead ppm ASTM D5185m >330 26 142 2 Tin ppm ASTM D5185m >330 26 142 2 Vanadium ppm ASTM D5185m >330 26 142 2 Vanadium ppm ASTM D5185m >330 26 142 2 Vanadium ppm ASTM D5185m >330 26 142 2 Titanium ppm ASTM D5185m >1 2 5 1 2 5 Visual NONE <t< th=""><th rowspan="9"></th><th>Chromium</th><th></th><th>ASTM D5185m</th><th>>20</th><th></th><th>1</th><th></th></t<>		Chromium		ASTM D5185m	>20		1	
Titanium ppm ASTM D5185m 0 <1							4	3
Silver ppm ASTM D5185m >2 0 <1								
Aluminum ppm ASTM D5185m >25 2 3 4 Lead ppm ASTM D5185m >40 1 2 5 7		Silver			>2		<1	0
Lead pm ASTM D5185m >40 1 1 1 1 1 Copper ppm ASTM D5185m >330 26 142 2 Tin ppm ASTM D5185m >15 1 2 5 Vanadium ppm ASTM D5185m 0 <1 0 <1 0 White Metal scalar *Visual NONE NONE NONE NONE NONE There is no indication of any contamination in the oil. Silicon ppm ASTM D5185m >20 2 2 2 2 Fuel WC Method >6.0 <1.0 <1.0 0.0 Water GV Col WC Method >0.2 REG N Soot % % ASTM D7844 >3 0.5 0.5 0.0 Sulfation Abs/tm *ASTM D7844 >30 18.9 19.5 24 Silt scalar *Visual NONE NONE NONE NONE		Aluminum						
Copper ppm ASTM D5185m >330 26 142 2 Tin ppm ASTM D5185m >15 1 2 5 Vanadium ppm ASTM D5185m >15 1 2 5 Vanadium ppm ASTM D5185m NONE N		Lead				1	1	1
Tin ppm ASTM D5185m >15 1 2 5 Vanadium ppm ASTM D5185m 0 <1 0 <1 0 White Metal scalar "Visual NONE N		Copper		ASTM D5185m	>330	26	142	216
Vanadium ppm ASTM D5185m 0 <1		Tin		ASTM D5185m	>15	1	2	5
White Metal Yellow Metal scalar *Visual NONE		Vanadium		ASTM D5185m		0	<1	0
Silicon ppm ASTM D5185m >25 4 8 22 Potassium ppm ASTM D5185m >20 2 2 2 2 Fuel WC Method >6.0 <1.0 <1.0 0.0 Water WC Method >0.2 NEG NEG N Glycol WC Method >0.2 NEG NEG N Soot % % *ASTM D7844 >3 0.5 0.5 0.0 Nitration Abs/cm *ASTM D7624 >20 7.6 8.1 9.9 Sulfation Abs/cm *ASTM D7155 >30 18.9 19.5 24 Silt scalar *Visual NONE NONE NONE NONE NO Sad/Dirt scalar *Visual NORML NORML NO NO NO Odor scalar *Visual NORML NORML NO NO NO Odor scalar *Visual NORML NORML NO NO NO Moder scalar <th></th> <th>White Metal</th> <th></th> <th></th> <th>NONE</th> <th>NONE</th> <th>NONE</th> <th>NONE</th>		White Metal			NONE	NONE	NONE	NONE
Potassium ppm ASTM D5185m >20 2 2 2 2 Fuel WC Method >6.0 <1.0 <1.0 0.0 Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG NEG Soot % % *ASTM D7844 >3 0.5 0.5 0.5 Nitration Abs/cm *ASTM D7415 >30 18.9 19.5 24 Sulfation Abs/lmm *ASTM D7415 >30 18.9 19.5 24 Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium ppm ASTM D5185m >20 2 2 2 2 Fuel WC Method >6.0 <1.0 <1.0 0.0 Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG NEG Soot % % *ASTM D7844 >3 0.5 0.5 0.5 Nitration Abs/cm *ASTM D7415 >30 18.9 19.5 24 Sulfation Abs/lmm *ASTM D7415 >30 18.9 19.5 24 Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML		Silicon		ASTM D5185m	<u>\</u> 25	л	Q	28
There is no indication of any contamination in the oil. Fuel WC Method >6.0 <1.0	JONT AMINA HON							
Water WC Method >0.2 NEG NEG <t< th=""><th rowspan="9">There is no indication of any contamination in the oil.</th><th></th><th>ppin</th><th></th><th></th><th></th><th></th><th>0.3</th></t<>	There is no indication of any contamination in the oil.		ppin					0.3
Glycol WC Method NEG NEG NEG N Soot % % *ASTM D7844 >3 0.5 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 7.6 8.1 9.5 Sulfation Abs/cm *ASTM D7615 >30 18.9 19.5 2.0 Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE NONE Appearance scalar *Visual NORML								NEG
Soot % % *ASTM D7844 >3 0.5 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 7.6 8.1 9.2 Sulfation Abs/.tmm *ASTM D7615 >30 18.9 19.5 20 Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML					20.L			NEG
Nitration Abs/cm *ASTM D7624 >20 7.6 8.1 9.1 Sulfation Abs/1mm *ASTM D7415 >30 18.9 19.5 20 Silt scalar *Visual NONE NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NO NONE NO			%		>3			0.5
Sulfation Abs/.1mm *ASTM D7415 >30 18.9 19.5 20 Silt scalar *Visual NONE NO NONE NO								9.7
Silt scalar *Visual NONE NO								20.7
Debris scalar *Visual NONE NO NONE NO								NONE
Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE NONE NONE NO Appearance scalar *Visual NORML NO								NONE
Appearance scalar *Visual NORML								NONE
Odor scalar *Visual NORML NORML NORML N Emulsified Water scalar *Visual >0.2 NEG NEG N FLUID CONDITION Sodium ppm ASTM D5185m >75 2 0 3								NORML
Emulsified Water scalar *Visual >0.2 NEG NEG N FLUID CONDITION Sodium ppm ASTM D5185m >75 2 0 3								NORML
		Emulsified Water		*Visual	>0.2	NEG	NEG	NEG
	LUID CONDITION		ppm					
The BN result indicates that there is suitable alkalinity remaining in the	The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm			2	3	26
oil The condition of the oil is suitable for further service								0
Molybdenum ppm ASIM D5185m 100 61 67 94		-			100			94
		-						2
		•						37
								2343
								1064
		Zino	ppm	ASTM D5185m	1350	1202	1115	1255
Sultur ppm ASIM D5185m 4250 3177 2572 3							0570	
		Sulfur	ppm	ASTM D5185m	4250	3177	2572	3814 15.9

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

ASTM D445 10.9

Visc @ 100°C cSt

6.8

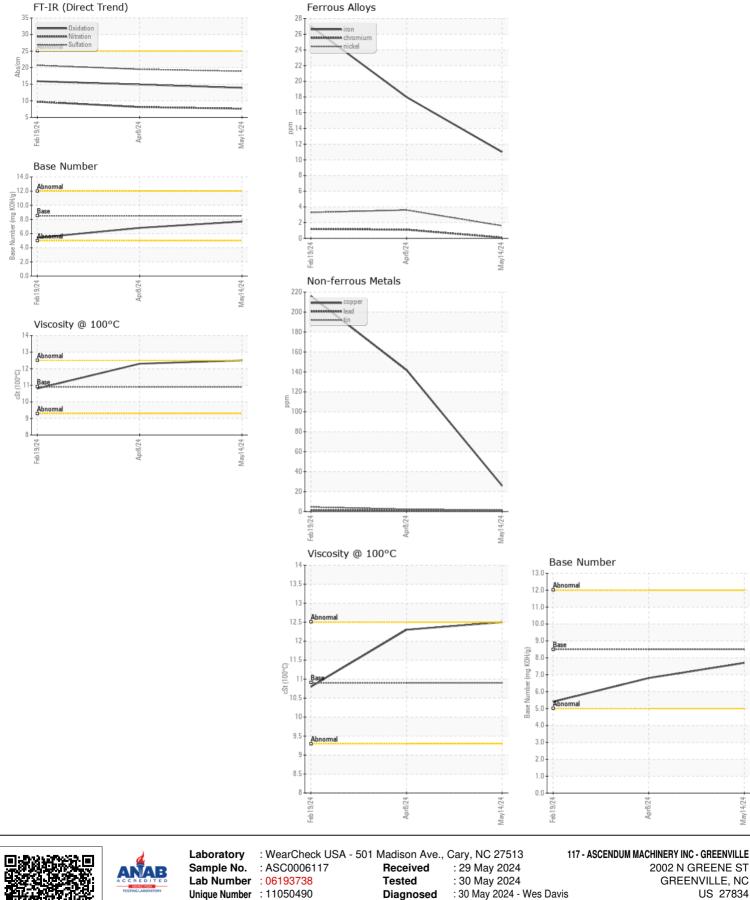
12.3

7.7

12.5

5.4

10.8



Test Package : CONST (Additional Tests: TBN) Contact: ALLEN WILLIAMS Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. allen.williams@ascendummachinery.com * - 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: (704)494-8197

Submitted By: Service - Brandon Lewis Page 2 of 2

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