

OIL ANALYSIS REPORT

Sample Rating Trend

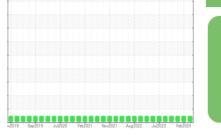




Machine Id VOLVO A40G LB-60 (S/N 340544) Component Diesel Engine

FLEETLINE SUPERFLEET XHD 15W40 (14 GAL)

SAMPLE INFORMATION method





DIAGNOSIS Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

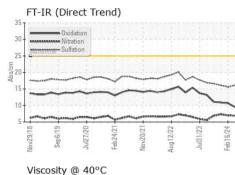
Fluid Condition

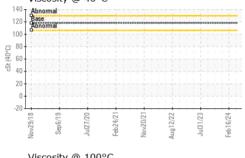
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

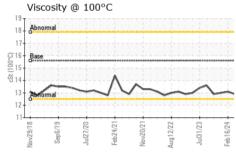
Sample Number		Client Info		PCA0109831	PCA0110084	LP0000767		
Sample Number		Client Info			16 Feb 2024	08 Dec 2023		
Sample Date Machine Age	hrs	Client Info		09 May 2024 15643	15391	15323		
Oil Age	hrs	Client Info		252	159	305		
Oil Changed	1115	Client Info		Changed	N/A	Changed		
Sample Status		Client Inio		NORMAL	NORMAL	NORMAL		
·				NORMAL	NORMAL	-		
CONTAMINAT	ION	method	limit/base	current	history1	history2		
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0		
Water	WC Method >0.2		>0.2	NEG	NEG	NEG		
Glycol		WC Method		NEG	NEG	NEG		
WEAR METAL	S	method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>100	3	<1	0		
Chromium	ppm	ASTM D5185m	>20	0	0	0		
Nickel	ppm	ASTM D5185m	>2	<1	<1	0		
Titanium	ppm	ASTM D5185m		2	<1	<1		
Silver	ppm	ASTM D5185m	>2	0	0	0		
Aluminum	ppm	ASTM D5185m	>25	2	2	2		
Lead	ppm	ASTM D5185m	>40	0	<1	0		
Copper	ppm	ASTM D5185m	>330	1	<1	1		
Tin	ppm	ASTM D5185m	>15	0	<1	0		
Vanadium	ppm	ASTM D5185m		0	0	0		
Cadmium	ppm	ASTM D5185m		0	0	0		
ADDITIVES		method	limit/base	current	history1	history2		
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 19	history1 31	history2 21		
	ppm ppm		limit/base					
Boron		ASTM D5185m	limit/base	19	31	21		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	19 0	31 0	21 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 13	31 0 38	21 0 38		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 13 <1	31 0 38 <1	21 0 38 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 13 <1 80	31 0 38 <1 113	21 0 38 <1 165		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 13 <1 80 2253	31 0 38 <1 113 1935	21 0 38 <1 165 1950		
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	limit/base	19 0 13 <1 80 2253 913	31 0 38 <1 113 1935 953	21 0 38 <1 165 1950 924		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 13 <1 80 2253 913 1055	31 0 38 <1 113 1935 953 1107	21 0 38 <1 165 1950 924 1102		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		19 0 13 <1 80 2253 913 1055 4096	31 0 38 <1 113 1935 953 1107 3623	21 0 38 <1 165 1950 924 1102 3402		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 13 <1 80 2253 913 1055 4096 current	31 0 38 <1 113 1935 953 1107 3623 history1	21 0 38 <1 165 1950 924 1102 3402 history2		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base >25	19 0 13 <1 80 2253 913 1055 4096 current 4	31 0 38 <1 113 1935 953 1107 3623 history1 4	21 0 38 <1 165 1950 924 1102 3402 history2 2		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base >25	19 0 13 <1 80 2253 913 1055 4096 current 4 4	31 0 38 <1 113 1935 953 1107 3623 history1 4 2	21 0 38 <1 165 1950 924 1102 3402 history2 2 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >20	19 0 13 <1 80 2253 913 1055 4096 current 4 4 4	31 0 38 <1 113 1935 953 1107 3623 history1 4 2 2 <1	21 0 38 <1 165 1950 924 1102 3402 history2 2 0 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	19 0 13 <1 80 2253 913 1055 4096 current 4 4 4 4 2 4 0.1	31 0 38 <1 113 1935 953 1107 3623 history1 4 2 <1 4 2 <1 history1 0.1	21 0 38 <1 165 1950 924 1102 3402 history2 2 0 0 0 history2 0.1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	19 0 13 <1 80 2253 913 1055 4096 current 4 4 4 4 4	31 0 38 <1 113 1935 953 1107 3623 history1 4 2 <1 history1	21 0 38 <1 165 1950 924 1102 3402 history2 2 0 0 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20 >3 >20	19 0 13 <1 80 2253 913 1055 4096 current 4 4 4 4 4 current 0.1 6.9 16.1	31 0 38 <1 113 1935 953 1107 3623 history1 4 2 <1 4 2 <1 history1 0.1 7.0	21 0 38 <1 165 1950 924 1102 3402 history2 2 0 0 0 history2 0.1 7.3 16.1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 >30	19 0 13 <1 80 2253 913 1055 4096 <i>current</i> 4 4 4 4 4 0.1 6.9 16.1 <i>current</i>	31 0 38 <1 113 1935 953 1107 3623 history1 4 2 <1 4 2 <1 0.1 7.0 15.6 history1	21 0 38 <1 165 1950 924 1102 3402 history2 2 0 0 0 history2 0.1 7.3 16.1 history2		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20 >30 >30	19 0 13 <1 80 2253 913 1055 4096 current 4 4 4 4 4 current 0.1 6.9 16.1	31 0 38 <1 113 1935 953 1107 3623 history1 4 2 <1 4 2 <1 0.1 7.0 15.6	21 0 38 <1 165 1950 924 1102 3402 history2 2 0 0 0 history2 0.1 7.3 16.1		

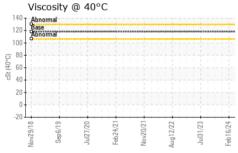


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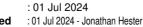








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1			Yello	w Met	al	:	scalar	*Visu	ual	NONE	Ξ	N	ONE		NON	IE		NONE	
4			Precipitate			:	scalar	*Visual		NONE	NONE		NONE			NONE		NONE	
~	2	**************************************	Silt			:	scalar	*Visu	ual	NONE	Ξ	N	ONE		NON	IE		NONE	
	1	-	Debris			:	scalar	*Visual		NONE		N	IONE		NONE		NONE		
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			Emulsified Water		:	scalar	*Visual		>0.2		Ν	NEG		NEG		NEG			
			Free Water		:	scalar	*Visual				N	EG		NEG	i		NEG		
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WEYMOUTH, MA US 02189 Contact: PAUL MOGAN lbstone611@comcast.net T: (781)331-5379



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)

Contact/Location: PAUL MOGAN - LORWEYMA

F: (781)337-8274