

OIL ANALYSIS REPORT

Sample Rating Trend





[W/O 10764] VOLVO A40G 341170 Component Diesel Engine

Fluid MOBIL 15W40 (15 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Area

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

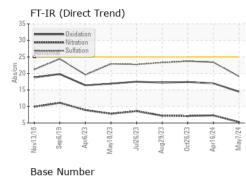
Fluid Condition

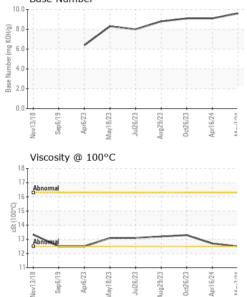
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		ML0001337	ML0000446	VCP419407
Sample Date		Client Info		07 May 2024	16 Apr 2024	26 Oct 2023
Machine Age	hrs	Client Info		11348	11296	10875
Oil Age	hrs	Client Info		52	250	250
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	2	8	5
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	<1	2	<1
Titanium	ppm	ASTM D5185m	~_	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm		>25	2	6	3
Lead	ppm	ASTM D5185m	>40	<1	1	0
Copper	ppm		>330	<1	2	<1
Tin	ppm	ASTM D5185m	>15	<1	1	0
Vanadium	ppm	ASTM D5185m	210	<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	1	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		92	495	437
Barium	ppm	ASTM D5185m		2	<1	4
Molybdenum						
	ppm	ASTM D5185m		75	167	
	mqq mqq	ASTM D5185m ASTM D5185m		75 <1	167 1	135
Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m		75 <1 679		135
	ppm ppm	ASTM D5185m		<1	1	135 0
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m		<1 679	1 832	135 0 654
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		<1 679 1271	1 832 2028	135 0 654 1497
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 679 1271 882	1 832 2028 1054	135 0 654 1497 741
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 679 1271 882 1013	1 832 2028 1054 1131	135 0 654 1497 741 841
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25	<1 679 1271 882 1013 2864	1 832 2028 1054 1131 3857	135 0 654 1497 741 841 2490
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method		<1 679 1271 882 1013 2864 current	1 832 2028 1054 1131 3857 history1	135 0 654 1497 741 841 2490 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	>25	<1 679 1271 882 1013 2864 current 5	1 832 2028 1054 1131 3857 history1 10	135 0 654 1497 741 841 2490 history2 6
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	>25 >118	<1 679 1271 882 1013 2864 current 5 0	1 832 2028 1054 1131 3857 history1 10 1	135 0 654 1497 741 841 2490 history2 6 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >118 >20	<1 679 1271 882 1013 2864 current 5 0 2	1 832 2028 1054 1131 3857 history1 10 1 2	135 0 654 1497 741 841 2490 history2 6 0 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >118 >20 limit/base	<1 679 1271 882 1013 2864 <u>current</u> 5 0 2 2 <u>current</u>	1 832 2028 1054 1131 3857 history1 10 1 2 history1	135 0 654 1497 741 841 2490 history2 6 0 1 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	>25 >118 >20 limit/base >3	<1 679 1271 882 1013 2864 current 5 0 2 2 current 0.1	1 832 2028 1054 1131 3857 history1 10 1 2 history1 0.1	135 0 654 1497 741 841 2490 history2 6 0 1 history2 0.1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >118 >20 limit/base >3 >20	<1 679 1271 882 1013 2864 <i>current</i> 5 0 2 <i>current</i> 0.1 5.3	1 832 2028 1054 1131 3857 history1 10 1 2 history1 0.1 7.3	135 0 654 1497 741 841 2490 history2 6 0 1 history2 0.1 7.1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D51854 *ASTM D7844 *ASTM D7624	>25 >118 >20 limit/base >3 >20 >30	<1 679 1271 882 1013 2864 <u>current</u> 5 0 2 <u>current</u> 0.1 5.3 19.1	1 832 2028 1054 1131 3857 history1 10 1 2 history1 0.1 7.3 23.4	135 0 654 1497 741 841 2490 history2 6 0 1 history2 0.1 7.1 23.7



OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		12.5	12.7	13.3

GRAPHS Ferrous Alloys 25 20 15 ppm 10 η. May18/23 vig29/23 Vov13/18 Non-ferrous Metals 3(25 lead 20 튭 15 10-0 May18/23 lav7/24 Vov13/ lep6, Viscosity @ 100°C Base Number 18 10.0 8 (mg KOH/g) 16 cSt (100°C) 6 (1 mber 4 (13 Base 12 11 0.0 May7/24 -Sep6/19. Apr6/23 Jul26/23 May7/24 Nov13/18 en6/19 Anr6/73 May18/23 Aug29/23 Apr16/24 Nov13/18 May18/23 Aua29/23 Apr16/24 : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MCCLUNG-LOGAN EQUIPMENT CO - MANASSAS : ML0001337 Received : 10 May 2024 8450 QUARRY ROAD Lab Number : 06176443 Tested : 13 May 2024 MANASSAS, VA Unique Number : 11022496 Diagnosed : 14 May 2024 - Sean Felton US 20110 Test Package : CONST (Additional Tests: TBN) Contact: MIKE MAYHUGH

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.

MMAYHUGH@MCCLUNG-LOGAN.COM T: (703)393-7344 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (703)393-7844



Certificate 12367

Laboratory

Sample No.

Submitted By: DELANO GREGORY