

OIL ANALYSIS REPORT

CONSTRUCTORS, INC **VOLVO D13 SCR 121265**

Component **Diesel Engine**

MOBIL DELVAC 1300 SUPER 10W30 (--- GAL)

Sample Rating Trend



Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

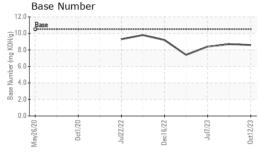
Fluid Condition

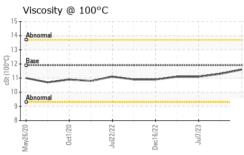
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0004893	SBP0004740	SBP0000692
Sample Date		Client Info		12 Oct 2023	16 Aug 2023	07 Jul 2023
Machine Age	hrs	Client Info		10741	10182	9738
Oil Age	hrs	Client Info		559	444	640
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3	3	4
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	1	<1
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	2	2	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
		memou	IIIIIII basc	Current	riistory i	HISTOTYE
Boron	ppm	ASTM D5185m	mm base	0	1	2
	ppm		iiiiii basc		•	· ·
Boron		ASTM D5185m	mm/basc	0	1	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	iiiiii basc	0 3	1 0	2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	iiiiii sase	0 3 57	1 0 56	2 1 57
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 3 57 <1	1 0 56 <1	2 1 57 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	0 3 57 <1 869	1 0 56 <1 885	2 1 57 <1 967
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII VASC	0 3 57 <1 869 987	1 0 56 <1 885 1086	2 1 57 <1 967 1169
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII VASC	0 3 57 <1 869 987 899	1 0 56 <1 885 1086 986	2 1 57 <1 967 1169 1027
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 ASTM D5185m	limit/base	0 3 57 <1 869 987 899 1108	1 0 56 <1 885 1086 986 1188	2 1 57 <1 967 1169 1027 1283
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 ASTM D5185m	limit/base	0 3 57 <1 869 987 899 1108 2792	1 0 56 <1 885 1086 986 1188 3285	2 1 57 <1 967 1169 1027 1283 3792
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 3 57 <1 869 987 899 1108 2792 current	1 0 56 <1 885 1086 986 1188 3285 history1	2 1 57 <1 967 1169 1027 1283 3792 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 3 57 <1 869 987 899 1108 2792 current	1 0 56 <1 885 1086 986 1188 3285 history1	2 1 57 <1 967 1169 1027 1283 3792 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 3 57 <1 869 987 899 1108 2792 current 3 4	1 0 56 < 1 885 1086 986 1188 3285 history1 2 < 1	2 1 57 <1 967 1169 1027 1283 3792 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20	0 3 57 <1 869 987 899 1108 2792 current 3 4	1 0 56 <1 885 1086 986 1188 3285 history1 2 <1	2 1 57 <1 967 1169 1027 1283 3792 history2 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20 limit/base >3	0 3 57 <1 869 987 899 1108 2792 current 3 4 <1	1 0 56 < 1 885 1086 986 1188 3285 history1 2 <1 2 history1	2 1 57 <1 967 1169 1027 1283 3792 history2 4 2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	0 3 57 <1 869 987 899 1108 2792 current 3 4 <1 current 0.1	1 0 56 < 1 885 1086 986 1188 3285 history1 2 < 1 2 history1 0.1	2 1 57 <1 967 1169 1027 1283 3792 history2 4 2 2 history2 0.1
Boron Barium Molybdenum 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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	0 3 57 <1 869 987 899 1108 2792 current 3 4 <1 current 0.1 5.9	1 0 56 < 1 885 1086 986 1188 3285 history1 2 <1 2 history1 0.1 5.5	2 1 57 <1 967 1169 1027 1283 3792 history2 4 2 2 history2 0.1 6.7
Boron Barium Molybdenum 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 Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >25 >20 limit/base >3 >20 >30	0 3 57 <1 869 987 899 1108 2792 current 3 4 <1 current 0.1 5.9 17.3	1 0 56 < 1 885 1086 986 1188 3285 history1 2 <1 2 history1 0.1 5.5 17.3	2 1 57 <1 967 1169 1027 1283 3792 history2 4 2 2 0.1 6.7 17.8



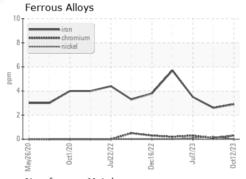
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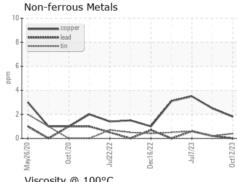


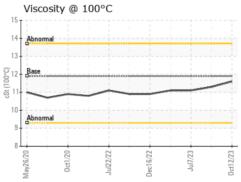


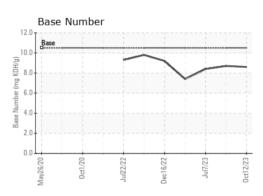
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPERTIES		method			riistory i	History2
Visc @ 100°C	cSt	ASTM D445	11.9	11.6	11.3	11.1













Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : SBP0004893 : 05980290 : 10697585

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received Diagnosed Diagnostician : Don Baldridge

: 16 Oct 2023 : 18 Oct 2023 Constructors Inc. - 603659 1815 Y Street Lincoln, NE

US 68508 Contact: Jack Linhart

jackl@constructorslincoln.com T: (402)434-2157

* - 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)