

OIL ANALYSIS REPORT

SAMPLE INFORMATION meth

Sample Rating Trend



NORMAL



VOLVO L220H 3064

Diesel Engine

CHEVRON 15W40 (15 GAL)

Recommendation

Resample at the next service interval to monitor.

Machine Id

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 Sample Date Machine Age Oil Age Oil Changed Sample Status	hrs hrs	Client Info Client Info Client Info Client Info		ML0001203 19 Apr 2024 17902 17902 Changed NORMAL	VCP409445 15 Dec 2023 16951 0 Changed NORMAL	VCP422878 03 Nov 2023 16503 0 Changed NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel Water		WC Method WC Method	>6.0 >0.1	<1.0 NEG	<1.0 NEG	<1.0 NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	7	2	1
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>10	1	0	0
Titanium	ppm	ASTM D5185m		1	2	2
Silver	ppm	ASTM D5185m	>2	0	0	1
Aluminum	ppm	ASTM D5185m	>10	4	1	2
Lead	ppm	ASTM D5185m	>20	3	0	0
Copper	ppm	ASTM D5185m	>15	3	0	0
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 224	history1 285	history2 364
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 224 2	history1 285 0	history2 364 <1
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113	history1 285 0 64	history2 364 <1 86
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1	history1 285 0 64 0	history2 364 <1 86 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1 554	history1 285 0 64 0 341	history2 364 <1 86 0 407
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1 554 1435	history1 285 0 64 0 341 1428	history2 364 <1 86 0 407 1358
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1 554 1435 813	history1 285 0 64 0 341 1428 870	history2 364 <1 86 0 407 1358 1075
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1 554 1435 813 985	history1 285 0 64 0 341 1428 870 1142	history2 364 <1 86 0 407 1358 1075 1294
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1 554 1435 813 985 2913	history1 285 0 64 0 341 1428 870 1142 3079	history2 364 <1 86 0 407 1358 1075 1294 3352
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1 554 1435 813 985 2913 current	history1 285 0 64 0 341 1428 870 1142 3079 history1	history2 364 <1 86 0 407 1358 1075 1294 3352 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 224 2 113 <1 554 1435 813 985 2913 current 19	history1 285 0 64 0 341 1428 870 1142 3079 history1 14	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base limit/base >20 >50	current 224 2 113 <1 554 1435 813 985 2913 current 19 1	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm	method ASTM D5185m	limit/base	current 224 2 113 <1 554 1435 813 985 2913 current 19 1 3	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1 0	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base limit/base >20 >50 >20 >20	current 224 2 113 <1 554 1435 813 985 2913 current 19 1 3 current	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1 0 history1	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1 <1 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm i ppm i	method ASTM D5185m	limit/base >20 >50 >20 limit/base >20 >3	current 224 2 113 <1 554 1435 813 985 2913 current 19 1 3 current 0.2	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1 0 history1 0 0 0.1	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1 <1 history2 0 <1 0.1
ADDITIVES 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	method ASTM D5185m	limit/base 	current 224 2 113 <1 554 1435 813 985 2913 current 19 1 3 current 0.2 8.3	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1 0 history1 0.1 6.4	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <
ADDITIVES 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	method ASTM D5185m	limit/base >20 >50 >20 limit/base >3 >20 >33 >20 >30	current 224 2 113 <1 554 1435 813 985 2913 current 19 1 3 current 0.2 8.3 23.0	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1 0 history1 0 0.1 6.4 20.6	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1 <1 history2 0.1 6.8 21.9
ADDITIVES 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	method ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3 >20 limit/base >3 >20 >30	current 224 2 113 <1 554 1435 813 985 2913 current 19 1 3 current 0.2 8.3 23.0	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1 0 history1 0.1 6.4 20.6 history1	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1 <1 <1 <1. 0.1 6.8 21.9 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7414	limit/base >20 >50 >20 limit/base >3 >20 >30 limit/base >30 limit/base >25	current 224 2 113 <1 554 1435 813 985 2913 current 19 1 3 current 0.2 8.3 23.0 current 18.2	history1 285 0 64 0 341 1428 870 1142 3079 history1 14 1 0 history1 0.1 6.4 20.6 history1 15.0	history2 364 <1 86 0 407 1358 1075 1294 3352 history2 20 <1 <1 history2 0.1 6.8 21.9 history2 15.7



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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.6	13.2	13.2



Laboratory Sample No. 1801 ANNAPOLIS RD : ML0001203 Received : 26 Apr 2024 Lab Number : 06161286 Tested : 28 Apr 2024 BALTIMORE, MD Unique Number : 10996709 Diagnosed : 29 Apr 2024 - Don Baldridge US 21230 Test Package : CONST (Additional Tests: TBN) Contact: SERVICE MANAGER Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. T: (215)428-7902 * - 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)

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Submitted By: Emylio Pineda

Page 2 of 2