

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Stoneway Concrete Renton [Stoneway Concrete Renton] 10-529

Diesel Engine

CASTROL Vecton LD 10W30 (--- GAL)

DIAGNOSIS Recommendation

Resample at the next service interval to monitor.

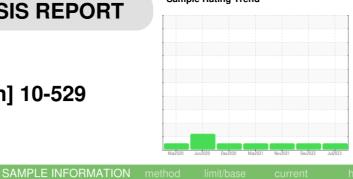
All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

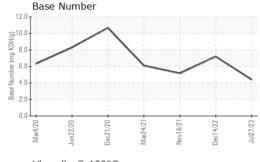
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

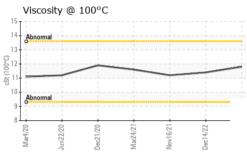


Sample Number		Client Info		PE0001156	PE0000340	PE12292688
Sample Date		Client Info		27 Jul 2023	14 Dec 2022	16 Nov 2021
Machine Age	hrs	Client Info		6537	5222	3821
Oil Age	hrs	Client Info		1315	1403	1328
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
-		and the selection of	11			history.0
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	1.52
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	16	23	22
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	6	9
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	4	19	49
Tin	ppm	ASTM D5185m	>15	<1	0	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVE O						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	current 33	history1 24	history2 24
	ppm		limit/base		•	
Boron		ASTM D5185m	limit/base	33	24	24
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	33 0	24	24
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	33 0 8	24 0 64	24 0 75
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	33 0 8 <1	24 0 64 <1	24 0 75
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	33 0 8 <1 114 2097 965	24 0 64 <1 1074 1190 1059	24 0 75 1243 1118 1125
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	33 0 8 <1 114 2097	24 0 64 <1 1074 1190	24 0 75 1243 1118
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	33 0 8 <1 114 2097 965	24 0 64 <1 1074 1190 1059	24 0 75 1243 1118 1125
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	33 0 8 <1 114 2097 965 1215	24 0 64 <1 1074 1190 1059 1373	24 0 75 1243 1118 1125
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		33 0 8 <1 114 2097 965 1215 3921	24 0 64 <1 1074 1190 1059 1373 3543	24 0 75 1243 1118 1125 1430
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	33 0 8 <1 114 2097 965 1215 3921 current	24 0 64 <1 1074 1190 1059 1373 3543 history1	24 0 75 1243 1118 1125 1430
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	33 0 8 <1 114 2097 965 1215 3921 current 3	24 0 64 <1 1074 1190 1059 1373 3543 history1	24 0 75 1243 1118 1125 1430 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	33 0 8 <1 114 2097 965 1215 3921 current 3 4	24 0 64 <1 1074 1190 1059 1373 3543 history1 5	24 0 75 1243 1118 1125 1430 history2 6 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20	33 0 8 <1 114 2097 965 1215 3921 current 3 4	24 0 64 <1 1074 1190 1059 1373 3543 history1 5 1	24 0 75 1243 1118 1125 1430 history2 6 2 20
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	limit/base >25 >20 limit/base	33 0 8 <1 114 2097 965 1215 3921 current 3 4 10	24 0 64 <1 1074 1190 1059 1373 3543 history1 5 1 13 history1 0.7	24 0 75 1243 1118 1125 1430 history2 6 2 20 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20 limit/base >3 >20	33 0 8 <1 114 2097 965 1215 3921 current 3 4 10 current 0.6	24 0 64 <1 1074 1190 1059 1373 3543 history1 5 1 13	24 0 75 1243 1118 1125 1430 history2 6 2 20 history2 0.3
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	33 0 8 <1 114 2097 965 1215 3921 current 3 4 10 current 0.6 9.9	24 0 64 <1 1074 1190 1059 1373 3543 history1 5 1 13 history1 0.7 11.4	24 0 75 1243 1118 1125 1430 history2 6 2 20 history2 0.3 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 limit/base	33 0 8 <1 114 2097 965 1215 3921 current 3 4 10 current 0.6 9.9 26.3 current	24 0 64 <1 1074 1190 1059 1373 3543 history1 5 1 13 history1 0.7 11.4 25.5 history1	24 0 75 1243 1118 1125 1430 history2 6 2 20 history2 0.3 11 history2
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 D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >25 >20 limit/base >3 >20 >30 limit/base	33 0 8 <1 114 2097 965 1215 3921 current 3 4 10 current 0.6 9.9 26.3	24 0 64 <1 1074 1190 1059 1373 3543 history1 5 1 13 history1 0.7 11.4 25.5	24 0 75 1243 1118 1125 1430 history2 6 2 20 history2 0.3 11



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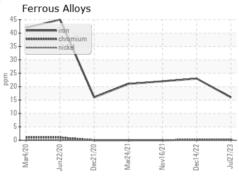


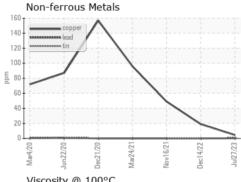


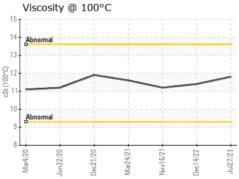
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

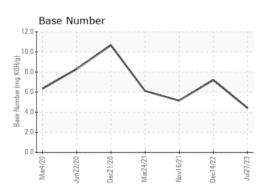
FLUID PHOPENTIES		method		riistory i	History2
Visc @ 100°C	cSt	ASTM D445	11.8	11.4	11.2

GRAPHS













Laboratory Sample No. Lab Number Unique Number : 10602601

: 05922654

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PE0001156

Received Diagnosed

: 11 Aug 2023 : 14 Aug 2023 Diagnostician : Don Baldridge

9125 10TH AVE SOUTH SEATTLE, WA US 98108 Contact: Tony

Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN) To discuss this sample report, contact Customer Service at 1-800-237-1369.

oilsamples@gmccinc.com T:

Gary Merlino Construction - Off Road Shop

* - 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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