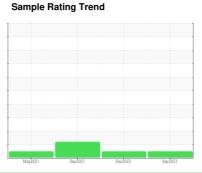


# **OIL ANALYSIS REPORT**

# Stoneway Concrete Renton [Stoneway Concrete Renton] 10-534

**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

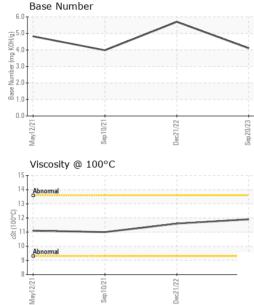
### **Fluid Condition**

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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PE0002289	PE0000334	PE12292743
Sample Date		Client Info		20 Sep 2023	21 Dec 2022	10 Sep 2021
Machine Age	hrs	Client Info		4562	3182	1433
Oil Age	hrs	Client Info		1380	1749	1433
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	24	43	69
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	6	18	15
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	4	26	58
Tin	ppm	ASTM D5185m	>15	0	<1	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 34	history1 20	history2 19
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	34	20	19
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	34 0	20	19 1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	34 0 10	20 0 64	19 1 68
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	34 0 10 <1	20 0 64 <1	19 1 68
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	34 0 10 <1 127	20 0 64 <1 1057	19 1 68  773
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	34 0 10 <1 127 2259	20 0 64 <1 1057 1100	19 1 68  773 1397
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	34 0 10 <1 127 2259 1018	20 0 64 <1 1057 1100 1001	19 1 68  773 1397 691
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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	34 0 10 <1 127 2259 1018 1302	20 0 64 <1 1057 1100 1001 1340	19 1 68  773 1397 691
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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		34 0 10 <1 127 2259 1018 1302 4209	20 0 64 <1 1057 1100 1001 1340 3191	19 1 68  773 1397 691 1007
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	34 0 10 <1 127 2259 1018 1302 4209 current	20 0 64 <1 1057 1100 1001 1340 3191 history1	19 1 68  773 1397 691 1007  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	34 0 10 <1 127 2259 1018 1302 4209 current	20 0 64 <1 1057 1100 1001 1340 3191 history1	19 1 68 773 1397 691 1007 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	34 0 10 <1 127 2259 1018 1302 4209 current 4	20 0 64 <1 1057 1100 1001 1340 3191 history1 5 3	19 1 68 773 1397 691 1007 history2 10 5
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	34 0 10 <1 127 2259 1018 1302 4209 current 4 5 26	20 0 64 <1 1057 1100 1001 1340 3191 history1 5 3 43	19 1 68 773 1397 691 1007 history2 10 5 44
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20 limit/base	34 0 10 <1 127 2259 1018 1302 4209 current 4 5 26	20 0 64 <1 1057 1100 1001 1340 3191 history1 5 3 43	19 1 68 773 1397 691 1007 history2 10 5 44 history2
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 ASTM D5185m	limit/base >25 >20 limit/base >3	34 0 10 <1 127 2259 1018 1302 4209 current 4 5 26 current 0.5	20 0 64 <1 1057 1100 1001 1340 3191 history1 5 3 43 history1 0.6	19 1 68 773 1397 691 1007 history2 10 5 44 history2 0.5
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	34 0 10 <1 127 2259 1018 1302 4209 current 4 5 26 current 0.5 10.0	20 0 64 <1 1057 1100 1001 1340 3191 history1 5 3 43 history1 0.6 11.9	19 1 68 773 1397 691 1007 history2 10 5 44 history2 0.5 12
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 D5185m  ASTM D5185m  ASTM D5185m  ASTM D7844  *ASTM D7624  *ASTM D76185m	limit/base >25 >20 limit/base >3 >20 >30	34 0 10 <1 127 2259 1018 1302 4209 current 4 5 26 current 0.5 10.0 26.3	20 0 64 <1 1057 1100 1001 1340 3191 history1 5 3 43 history1 0.6 11.9 24.7	19 1 68 773 1397 691 1007 history2 10 5 44 history2 0.5 12
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	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  METHOD  *ASTM D7844  *ASTM D7624  *ASTM D7415  METHOD	limit/base >25 >20 limit/base >3 >20 >30 limit/base	34 0 10 <1 127 2259 1018 1302 4209 current 4 5 26 current 0.5 10.0 26.3 current	20 0 64 <1 1057 1100 1001 1340 3191 history1 5 3 43 history1 0.6 11.9 24.7 history1	19 1 68 773 1397 691 1007 history2 10 5 44 history2 0.5 12 history2

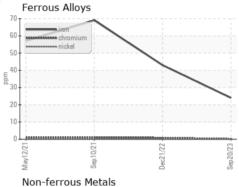


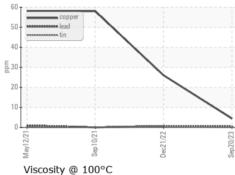
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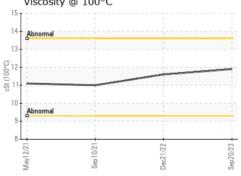


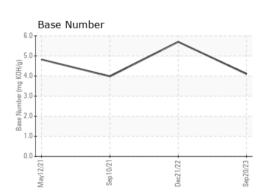
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance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

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Visc @ 100°C	cSt	ASTM D445	11.9	11.6	11.0











Laboratory Sample No. Lab Number Unique Number : 10661701

: PE0002289 : 05960488

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

: 25 Sep 2023 : 27 Sep 2023 Diagnostician : Don Baldridge

Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

Gary Merlino Construction - Off Road Shop 9125 10TH AVE SOUTH

SEATTLE, WA US 98108 Contact: Tony

oilsamples@gmccinc.com T:

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)

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