

OIL ANALYSIS REPORT

Stoneway Concrete Renton [Stoneway Concrete Renton] 10-540

Diesel Engine

{not provided} (--- GAL)

Sample Rating Trend **WEAR**

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Cylinder, crank, or cam shaft wear is indicated.

Contamination

There is no indication of any contamination in the

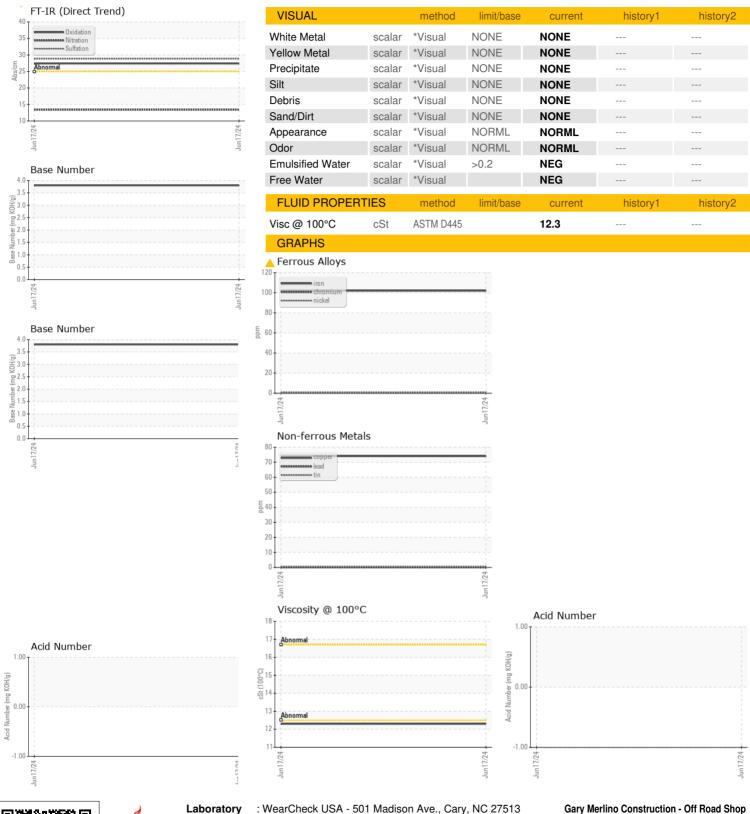
Fluid Condition

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

SAMPLE INFORMATION method limil/base current history1 history2					Jun 2024		
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 17 Jun 2024 Machine Age hrs Client Info 2175 Oil Olage hrs Client Info Changed Oil Changed Client Info Changed Sample Status Median CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG Glycol WC Method NEG Glycol WC Method NEG Cloy WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >10 10 Iron ppm ASTM D5185m >20 +1 Silver ppm ASTM D5185m >30 74 <td>Sample Number</td> <td></td> <td>Client Info</td> <td></td> <th>PE0002061</th> <td></td> <td></td>	Sample Number		Client Info		PE0002061		
Machine Age hrs Client Info 2175 Oil Age hrs Client Info 2175 Oil Changed Client Info Changed Sample Status Image: Client Info Changed CONTAMINATION method limit/base current history1 history2 Water WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 102 Iron ppm ASTM D5185m >20 <1			Client Info		17 Jun 2024		
Oil Age hrs Client Info 2175	·	hrs	Client Info		2175		
Oil Changed Sample Status Client Info Changed ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 102 Chromium ppm ASTM D5185m >20 <1 Nickel ppm ASTM D5185m >20 <1 Silver ppm ASTM D5185m >20 18 Aluminum ppm ASTM D5185m >20 18 Copper ppm ASTM D5185m >33 74 Tin ppm ASTM D5185m >15 <1	-	hrs	Client Info		2175		
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 102 Chromium ppm ASTM D5185m >20 <1	-		Client Info		Changed		
Water WC Method >0.2 NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 102 Chromium ppm ASTM D5185m >20 <1 Nickel ppm ASTM D5185m >4 <1 Silver ppm ASTM D5185m >4 <1 Aluminum ppm ASTM D5185m >40 0 Aluminum ppm ASTM D5185m >40 0 Lead ppm ASTM D5185m >40 0 Copper ppm ASTM D5185m >15 <1 Vanadium ppm ASTM D5185m 0	-				_		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 102 Nickel ppm ASTM D5185m >20 <1 Nickel ppm ASTM D5185m >4 <1 Silver ppm ASTM D5185m >3 <1 Aluminum ppm ASTM D5185m >30 18 Aluminum ppm ASTM D5185m >40 0 Lead ppm ASTM D5185m >300 74 Lead ppm ASTM D5185m >15 <1 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Barium ppm ASTM D5185m 16	CONTAMINATION	١	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 102 Chromium ppm ASTM D5185m >20 <1	Water		WC Method	>0.2	NEG		
Iron	Glycol		WC Method		NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >20 <1 Nickel ppm ASTM D5185m >4 <1	Iron	maa	ASTM D5185m	>100	<u> 102</u>		
Nickel	-				-		
Silver							
Silver	Titanium		ASTM D5185m		0		
Aluminum ppm ASTM D5185m >20 18 Lead ppm ASTM D5185m >40 0 Copper ppm ASTM D5185m >330 74 Tin ppm ASTM D5185m >15 <1	Silver			>3			
Lead	Aluminum		ASTM D5185m	>20	18		
Copper ppm ASTM D5185m >330 74 Tin ppm ASTM D5185m >15 <1	Lead			>40	0		
Trin	Copper		ASTM D5185m	>330	74		
Vanadium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 20 Barium ppm ASTM D5185m <1 Molybdenum ppm ASTM D5185m 16 Manganese ppm ASTM D5185m 3 Magnesium ppm ASTM D5185m 586 Calcium ppm ASTM D5185m 895 Phosphorus ppm ASTM D5185m 3386 Zinc ppm ASTM D5185m 3386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m >20 <td></td> <td></td> <td>ASTM D5185m</td> <td>>15</td> <th><1</th> <td></td> <td></td>			ASTM D5185m	>15	<1		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 20 Barium ppm ASTM D5185m <1	Vanadium		ASTM D5185m		0		
Boron	Cadmium		ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185m <1 Molybdenum ppm ASTM D5185m 16 Magnesium ppm ASTM D5185m 586 Calcium ppm ASTM D5185m 1679 Phosphorus ppm ASTM D5185m 895 Zinc ppm ASTM D5185m 1115 Sulfur ppm ASTM D5185m 3386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 5 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m 5 Fuel % ASTM D5185m >20 53 Fuel % ASTM D7844 >3 0.6	Boron	ppm	ASTM D5185m		20		
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Magnesium ppm ASTM D5185m 586 Calcium ppm ASTM D5185m 1679 Phosphorus ppm ASTM D5185m 895 Zinc ppm ASTM D5185m 1115 Sulfur ppm ASTM D5185m 3386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0	Molybdenum	ppm	ASTM D5185m		16		
Calcium ppm ASTM D5185m 1679 Phosphorus ppm ASTM D5185m 895 Zinc ppm ASTM D5185m 1115 Sulfur ppm ASTM D5185m 3386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m 5 Fuel % ASTM D5185m >20 53 Fuel % ASTM D5185m >20 53 Fuel % ASTM D5185m >3 0.6 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/.1mm </td <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>3</th> <td></td> <td></td>	Manganese	ppm	ASTM D5185m		3		
Phosphorus ppm ASTM D5185m 895 Zinc ppm ASTM D5185m 1115 Sulfur ppm ASTM D5185m 3386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2	Magnesium	ppm	ASTM D5185m		586		
Zinc ppm ASTM D5185m 1115 Sulfur ppm ASTM D5185m 3386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0	Calcium	ppm	ASTM D5185m		1679		
Sulfur ppm ASTM D5185m 3386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0	Phosphorus	ppm	ASTM D5185m		895		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0	Zinc	ppm	ASTM D5185m		1115		
Silicon ppm ASTM D5185m >25 11 Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	Sulfur	ppm	ASTM D5185m		3386		
Sodium ppm ASTM D5185m 5 Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 53 Fuel % ASTM D3524 >5 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	Silicon	ppm	ASTM D5185m	>25	11		
Fuel % ASTM D3524 >5 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	Sodium	ppm	ASTM D5185m		5		
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	Potassium	ppm		>20	53		
Soot % % *ASTM D7844 >3 0.6 Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	Fuel	%	ASTM D3524	>5	<1.0		
Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 13.4 Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	Soot %	%	*ASTM D7844	>3	0.6		
Sulfation Abs/.1mm *ASTM D7415 >30 28.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 27.4	Nitration	Abs/cm	*ASTM D7624	>20			
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30			
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 3.8	Oxidation	Abs/.1mm	*ASTM D7414	>25	27.4		
	Base Number (BN)	mg KOH/g	ASTM D2896		3.8		



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: PE0002061 Lab Number : 06220566 Unique Number : 11098763

Received : 25 Jun 2024 **Tested**

: 27 Jun 2024 : 27 Jun 2024 - Jonathan Hester

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

SEATTLE, WA US 98108

Diagnosed Test Package : CONST (Additional Tests: FT-IR, FuelDilution, ICP, KV100, PercentFuel, SCREEN, TAN MacGinetact: Jesse Patterson To discuss this sample report, contact Customer Service at 1-800-237-1369. oilsamples@gmccinc.com

 st - 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) T: 1(866)292-1303

Report Id: GARSEA [WUSCAR] 06220566 (Generated: 06/30/2024 17:09:18) Rev: 1

Contact/Location: Off Road Shop - Jesse Patterson - GARSEA