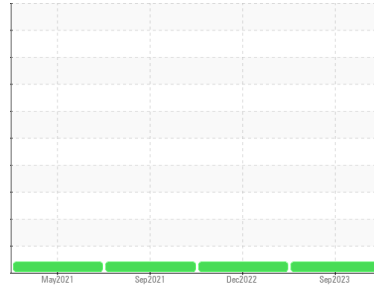


# PROBLEM SUMMARY

Sample Rating Trend



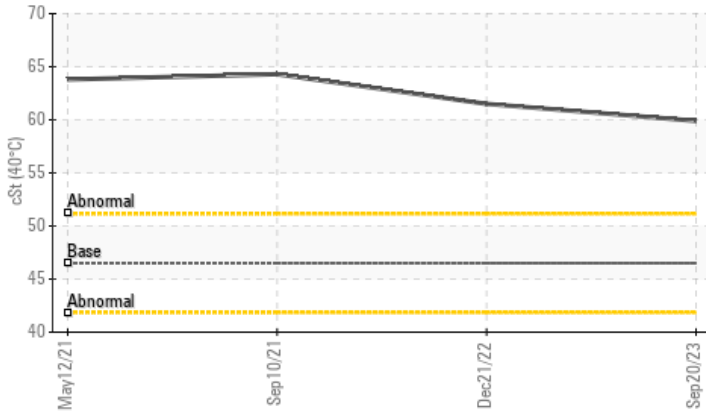
## VISCOSITY



Area  
**Stoneway Concrete Renton**  
 Machine Id  
**[Stoneway Concrete Renton] 10-534**  
 Component  
**Hydraulic System**  
 Fluid  
**CASTROL DUAL RANGE HV HYD OIL ISO 46 (--- GAL)**

### COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



### RECOMMENDATION

Resample at the next service interval to monitor.

### PROBLEMATIC TEST RESULTS

Sample Status				<b>MARGINAL</b>	MARGINAL	MARGINAL
Visc @ 40°C	cSt	ASTM D445	46.5	▲ 59.9	▲ 61.5	▲ 64.3

Customer Id: GARSEA  
 Sample No.: PE0002288  
 Lab Number: 05960518  
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

There are no recommended actions for this sample.

## HISTORICAL DIAGNOSIS

### 21 Dec 2022 Diag: Don Baldrige

#### VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

view report



### 10 Sep 2021 Diag: Wes Davis

#### VISCOSITY



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 12 May 2021 Diag: Wes Davis

#### VISCOSITY

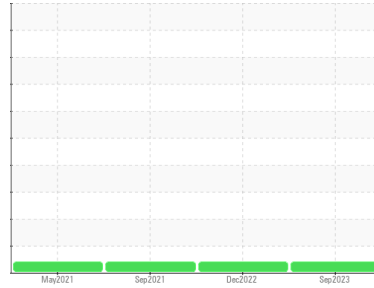


Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Area  
**Stoneway Concrete Renton**  
 Machine Id  
**[Stoneway Concrete Renton] 10-534**  
 Component  
**Hydraulic System**  
 Fluid  
**CASTROL DUAL RANGE HV HYD OIL ISO 46 (--- GAL)**



**DIAGNOSIS**

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

**Fluid Condition**  
 Viscosity of sample indicates oil is within ISO 68 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

**SAMPLE INFORMATION**

method	limit/base	current	history1	history2	
Sample Number	Client Info	<b>PE0002288</b>	PE0000335	PE12292763	
Sample Date	Client Info	<b>20 Sep 2023</b>	21 Dec 2022	10 Sep 2021	
Machine Age	hrs	Client Info	<b>4562</b>	3182	1433
Oil Age	hrs	Client Info	<b>4562</b>	3182	1433
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Changed	
Sample Status		<b>MARGINAL</b>	MARGINAL	MARGINAL	

**WEAR METALS**

method	limit/base	current	history1	history2	
PQ	ASTM D8184	<b>11</b>	9	---	
Iron	ppm	ASTM D5185m >20	<b>5</b>	<1	3
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >10	<b>0</b>	0	0
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	1
Copper	ppm	ASTM D5185m >75	<b>10</b>	9	7
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Antimony	ppm	ASTM D5185m	<b>---</b>	---	2
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

**ADDITIVES**

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	<b>2</b>	0	1
Calcium	ppm	ASTM D5185m	<b>24</b>	20	38
Phosphorus	ppm	ASTM D5185m	<b>337</b>	343	327
Zinc	ppm	ASTM D5185m	<b>439</b>	443	461
Sulfur	ppm	ASTM D5185m	<b>971</b>	1003	---

**CONTAMINANTS**

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >20	<b>1</b>	<1	1
Sodium	ppm	ASTM D5185m	<b>3</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>1</b>	0	0

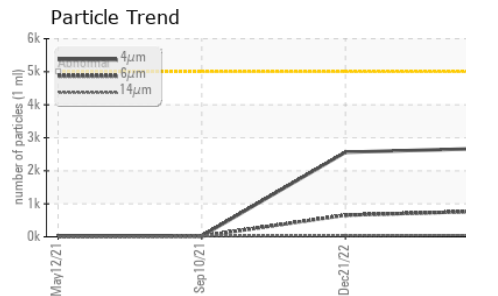
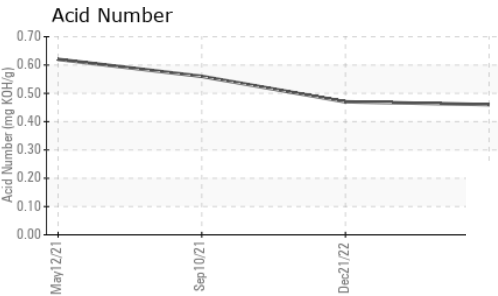
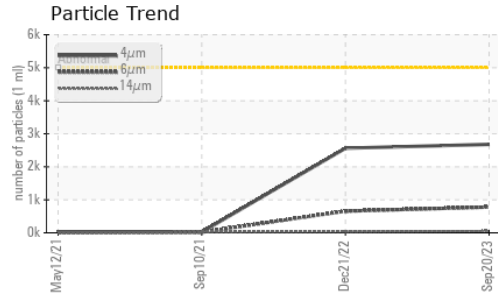
**FLUID CLEANLINESS**

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>2678</b>	2562	23
Particles >6µm	ASTM D7647 >1300	<b>781</b>	656	21
Particles >14µm	ASTM D7647 >160	<b>54</b>	35	19
Particles >21µm	ASTM D7647 >40	<b>15</b>	7	---
Particles >38µm	ASTM D7647 >10	<b>0</b>	0	---
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	---
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>19/17/13</b>	19/17/12	---

**FLUID DEGRADATION**

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.46</b>	0.47	0.56

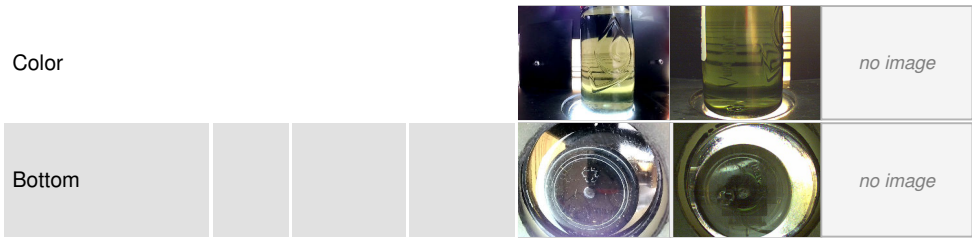
# OIL ANALYSIS REPORT



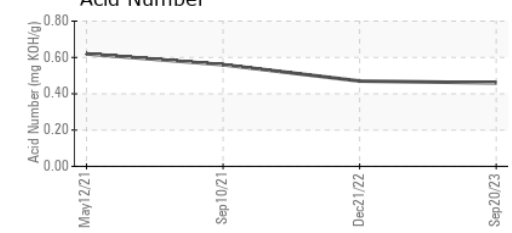
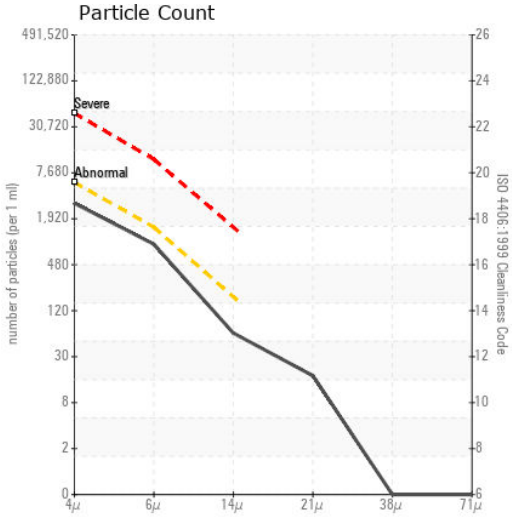
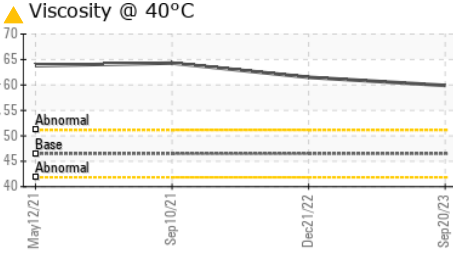
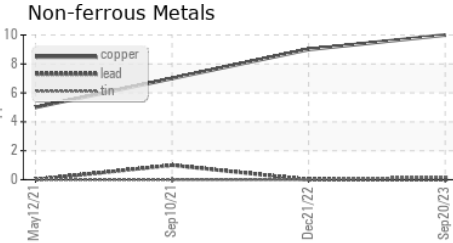
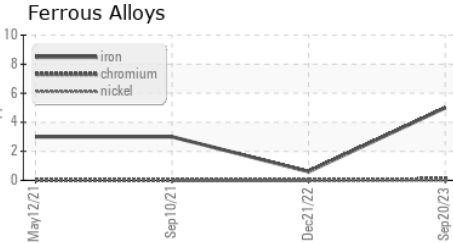
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.5 ▲ 59.9	▲ 61.5	▲ 64.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0002288 **Received** : 25 Sep 2023  
**Lab Number** : 05960518 **Diagnosed** : 27 Sep 2023  
**Unique Number** : 10661731 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN )

**Gary Merlino Construction - Off Road Shop**  
 9125 10TH AVE SOUTH  
 SEATTLE, WA  
 US 98108  
 Contact: Tony  
 oilsamples@gmccinc.com

Certificate L2367  
 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)