

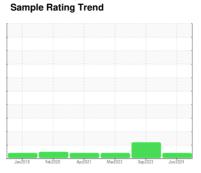
OIL ANALYSIS REPORT

Area

Stoneway Concrete Renton [Stoneway Concrete Renton] 10-512

Hydraulic System

CHEVRON RANDO HD 68 (--- 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

The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PE0003273	PE0002160	PE0001826
Sample Date		Client Info		17 Jun 2024	25 Sep 2023	08 Mar 2023
Machine Age	hrs	Client Info		13297	11781	10434
Oil Age	hrs	Client Info		13297	11781	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ATTENTION	ATTENTION
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		21	15	16
Iron	ppm	ASTM D5185m	>20	6	7	7
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	0	1
Lead	ppm	ASTM D5185m	>10	0	<1	<1
Copper	ppm	ASTM D5185m	>75	10	10	10
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Antimony	ppm	ASTM D5185m				
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 0	history1	history2 <1
	ppm		limit/base			
Boron		ASTM D5185m	limit/base	0	0	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	0	<1 4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0	0 0 0	<1 4 <1
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 <1	0 0 0	<1 4 <1 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 <1 1	0 0 0 0	<1 4 <1 <1 10
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	0 0 0 <1 1 39	0 0 0 0 2 34	<1 4 <1 <1 10 64
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	0 0 0 <1 1 39 319	0 0 0 0 2 34 317	<1 4 <1 <1 10 64 322
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	0 0 0 <1 1 39 319	0 0 0 0 2 34 317 389	<1 4 <1 <1 10 64 322 402
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		0 0 0 <1 1 39 319 362 1008	0 0 0 0 2 34 317 389 1022	<1 4 <1 <1 10 64 322 402 1067
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 0 <1 1 39 319 362 1008	0 0 0 0 2 34 317 389 1022 history1	<1 4 <1 <1 10 64 322 402 1067 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 0 <1 1 39 319 362 1008 current	0 0 0 0 2 34 317 389 1022 history1	<1 4 <1 10 64 322 402 1067 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20	0 0 0 <1 1 39 319 362 1008 current	0 0 0 0 2 34 317 389 1022 history1	<1 4 <1 10 64 322 402 1067 history2 3 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 >20	0 0 0 <1 1 39 319 362 1008 current 2 1	0 0 0 0 2 34 317 389 1022 history1 3 0 <1	<1 4 <1 10 64 322 402 1067 history2 3 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 >20 limit/base	0 0 0 <1 1 39 319 362 1008 current 2 1 <1	0 0 0 0 2 34 317 389 1022 history1 3 0 <1	<1 4 <1 10 64 322 402 1067 history2 3 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 >20 limit/base >5000	0 0 0 <1 1 39 319 362 1008 current 2 1 <1	0 0 0 0 2 34 317 389 1022 history1 3 0 <1 history1	<1 4 <1 10 64 322 402 1067 history2 3 <1 <1 history2 2678
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >5000 >1300 >160	0 0 0 <1 1 39 319 362 1008 current 2 1 <1 current 588 150	0 0 0 0 2 34 317 389 1022 history1 3 0 <1 history1	<1 4 <1 10 64 322 402 1067 history2 3 <1 <1 history2 2678 301
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160	0 0 0 -<1 1 39 319 362 1008 current 2 1 -<1 current 588 150 15	0 0 0 0 2 34 317 389 1022 history1 3 0 <1 history1 7240 1159 28	<1 4 <1 10 64 322 402 1067 history2 3 <1 <1 history2 2678 301 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40	0 0 0 <1 1 39 319 362 1008 current 2 1 <1 current 588 150 15	0 0 0 0 2 34 317 389 1022 history1 3 0 <1 history1 7240 1159 28 3	<1 4 <1 10 64 322 402 1067 history2 3 <1 <1 history2 2678 301 8 3



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: PE0003273 Lab Number : 06220350 Unique Number: 11098547

Received : 25 Jun 2024 **Tested**

Diagnosed Test Package : CONST (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)

: 26 Jun 2024 : 27 Jun 2024 - Doug Bogart

9125 10TH AVE SOUTH

US 98108 Contact: Tony Wytko oilsamples@gmccinc.com

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)

T:

F:

SEATTLE, WA