

OIL ANALYSIS REPORT

VISUAL METAL

GUAY SON [CONHER] MAIN ENGINE

Component

Transmission (Manual)

Raloy SAE 50 (--- GAL)

Recommendation

DIAGNOSIS

We recommend you service the filters on this component. We advise that you inspect for the source(s) of metal. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample.

Wear

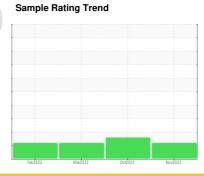
Moderate concentration of visible metal present. All component wear rates are normal.

Contamination

No other contaminants were detected in the fluid.

Fluid Condition

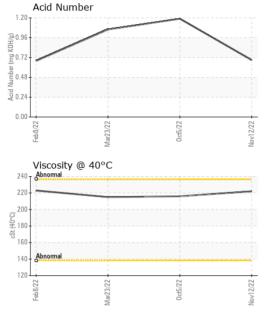
The AN level is acceptable for this fluid.



SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KL0011232	KL0010143	KL0009175
Sample Date		Client Info		12 Nov 2022	05 Oct 2022	23 Mar 2022
Machine Age	hrs	Client Info		10850	10060	1000
Oil Age	hrs	Client Info		790	233	1000
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	150	66	64
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>7	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	1	1
Lead	ppm	ASTM D5185m	>45	3	2	<1
Copper	ppm	ASTM D5185m	>225	70	39	25
Tin	ppm	ASTM D5185m	>10	<1	2	0
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current <1	history1 4	history2 3
	ppm		limit/base		4 0	
Boron		ASTM D5185m	limit/base	<1 0 1	4	3 0 1
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	limit/base	<1 0	4 0 2 <1	3 0 1 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 1 2 17	4 0 2 <1 13	3 0 1 <1 9
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 1 2 17 3383	4 0 2 <1 13 3461	3 0 1 <1 9 3581
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 1 2 17 3383 882	4 0 2 <1 13 3461 956	3 0 1 <1 9 3581 977
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 1 2 17 3383 882 837	4 0 2 <1 13 3461 956 1029	3 0 1 <1 9 3581 977 953
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	<1 0 1 2 17 3383 882	4 0 2 <1 13 3461 956	3 0 1 <1 9 3581 977
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	<1 0 1 2 17 3383 882 837	4 0 2 <1 13 3461 956 1029	3 0 1 <1 9 3581 977 953
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	limit/base	<1 0 1 2 17 3383 882 837 6539	4 0 2 <1 13 3461 956 1029 7156	3 0 1 <1 9 3581 977 953 4843
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	limit/base	<1 0 1 2 17 3383 882 837 6539	4 0 2 <1 13 3461 956 1029 7156 history1	3 0 1 <1 9 3581 977 953 4843 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	<1 0 1 2 17 3383 882 837 6539 current	4 0 2 <1 13 3461 956 1029 7156 history1	3 0 1 <1 9 3581 977 953 4843 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 >125	<1 0 1 2 17 3383 882 837 6539 current 28 5	4 0 2 <1 13 3461 956 1029 7156 history1 9	3 0 1 <1 9 3581 977 953 4843 history2
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 >125 >20	<1 0 1 2 17 3383 882 837 6539 current 28 5 0	4 0 2 <1 13 3461 956 1029 7156 history1 9 0 2	3 0 1 <1 9 3581 977 953 4843 history2 12 3 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >125 >20 limit/base	<1 0 1 2 17 3383 882 837 6539 current 28 5 0 current	4 0 2 <1 13 3461 956 1029 7156 history1 9 0 2	3 0 1 <1 9 3581 977 953 4843 history2 12 3 0
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 ppm	ASTM D5185m method ASTM D5185m	limit/base >125 >20 limit/base	<1 0 1 2 17 3383 882 837 6539 current 28 5 0 current	4 0 2 <1 13 3461 956 1029 7156 history1 9 0 2 history1 302502 ▲ 129699 ▲ 5671	3 0 1 <1 9 3581 977 953 4843 history2 12 3 0 history2
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 ppm	ASTM D5185m method ASTM D5185m	limit/base >125 >20 limit/base >2500 >320	<1 0 1 2 17 3383 882 837 6539 current 28 5 0 current	4 0 2 <1 13 3461 956 1029 7156 history1 9 0 2 history1 302502 ▲ 129699	3 0 1 <1 9 3581 977 953 4843 history2 12 3 0 history2 182847 ▲ 89253
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 ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	limit/base >125 >20 limit/base >2500 >320	<1 0 1 2 17 3383 882 837 6539 current 28 5 0 current	4 0 2 <1 13 3461 956 1029 7156 history1 9 0 2 history1 302502 ▲ 129699 ▲ 5671	3 0 1 <1 9 3581 977 953 4843 history2 12 3 0 history2 182847 ▲ 89253 ▲ 3480
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 ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >125 >20 limit/base >2500 >320 >80 >20	<1 0 1 2 17 3383 882 837 6539 current 28 5 0 current	4 0 2 <1 13 3461 956 1029 7156 history1 9 0 2 history1 302502 ▲ 129699 ▲ 5671 ▲ 673	3 0 1 <1 9 3581 977 953 4843 history2 12 3 0 history2 182847 ▲ 89253 ▲ 3480 ▲ 247

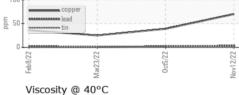


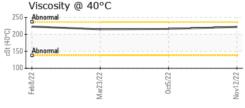
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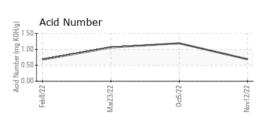


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.69	1.19	1.06
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	▲ MODER	MODER	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		222	216	215
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color					no image	

GRAPHS Ferrous Alloys Non-ferrous Metals







no image





Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: KL0011232 : 05702980 : 10232554

Bottom

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

: 25 Nov 2022 : 29 Nov 2022

Diagnostician : Don Baldridge

Test Package : MOB 2 (Additional Tests: PrtCount) 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)

CONOR JUAREZ 348

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