

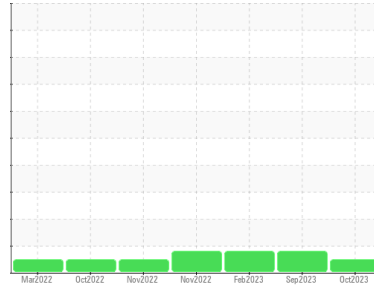


OIL ANALYSIS REPORT



Area
GUAY SON [CONHER]
 Machine Id
CATERPILLAR ESTRELLA DE LOS MARES - IBACO
 Component
Transmission (Manual)
 Fluid
Raloy SAE 50 (60 LTR)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KL0013344	KL0012812	KL0011346
Sample Date	Client Info		21 Oct 2023	16 Sep 2023	23 Feb 2023
Machine Age	hrs	Client Info	14874	14237	14227
Oil Age	hrs	Client Info	647	10	2163
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			NORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	24	58	44
Chromium	ppm	ASTM D5185m >5	0	0	<1
Nickel	ppm	ASTM D5185m >5	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >7	0	0	0
Aluminum	ppm	ASTM D5185m >25	<1	<1	2
Lead	ppm	ASTM D5185m >45	6	6	6
Copper	ppm	ASTM D5185m >225	73	73	75
Tin	ppm	ASTM D5185m >10	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	1
Barium	ppm	ASTM D5185m	0	0	4
Molybdenum	ppm	ASTM D5185m	<1	<1	1
Manganese	ppm	ASTM D5185m	<1	<1	2
Magnesium	ppm	ASTM D5185m	12	12	23
Calcium	ppm	ASTM D5185m	3022	2533	3287
Phosphorus	ppm	ASTM D5185m	869	685	819
Zinc	ppm	ASTM D5185m	714	620	785
Sulfur	ppm	ASTM D5185m	6082	5373	6605

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >125	9	8	8
Sodium	ppm	ASTM D5185m	16	4	2
Potassium	ppm	ASTM D5185m >20	2	<1	<1

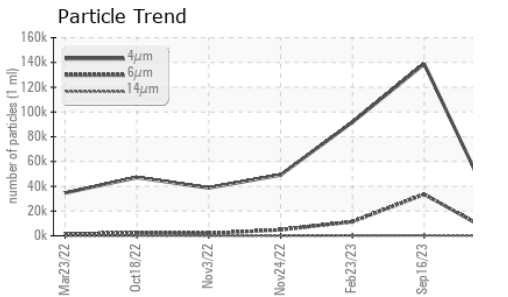
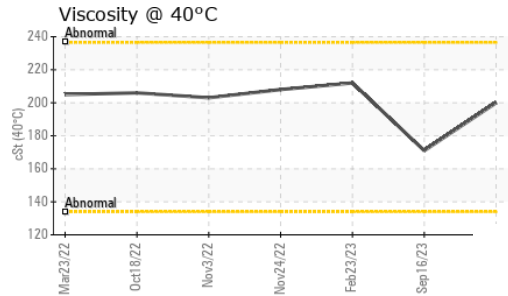
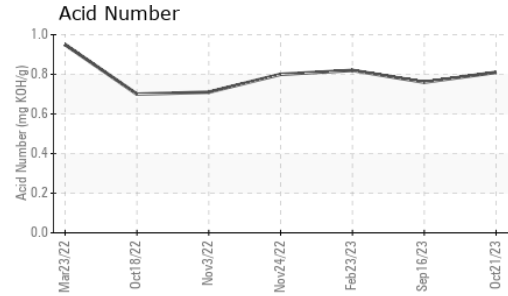
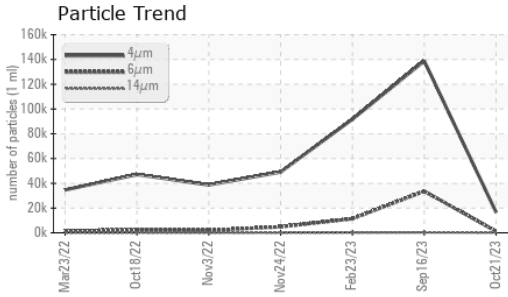
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		16644	138776	91704
Particles >6µm	ASTM D7647	>2500	1232	▲ 33592	▲ 11378
Particles >14µm	ASTM D7647	>320	49	295	153
Particles >21µm	ASTM D7647	>80	14	35	16
Particles >38µm	ASTM D7647	>20	1	1	1
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>18/15	17/13	▲ 22/15	▲ 21/14

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.81	0.76	0.82

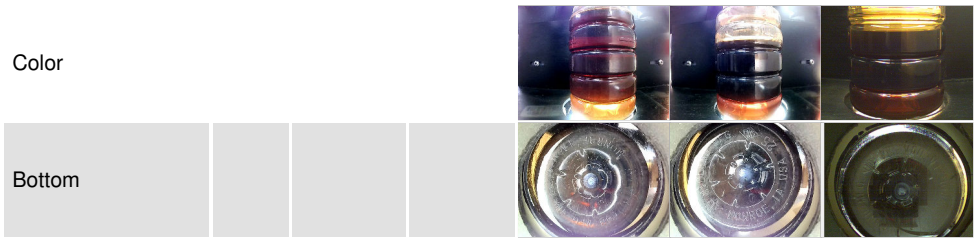
OIL ANALYSIS REPORT



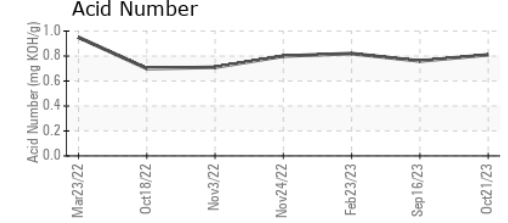
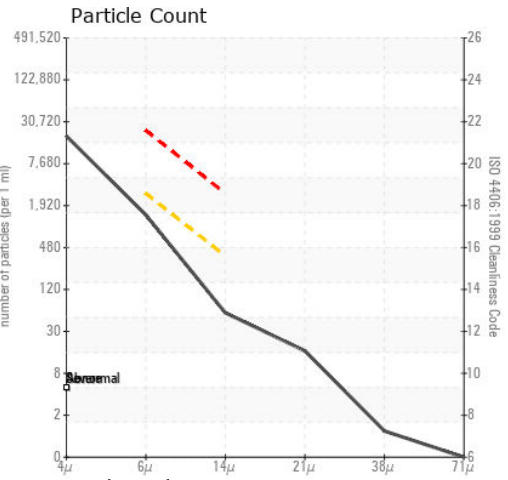
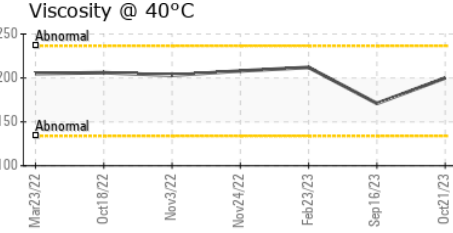
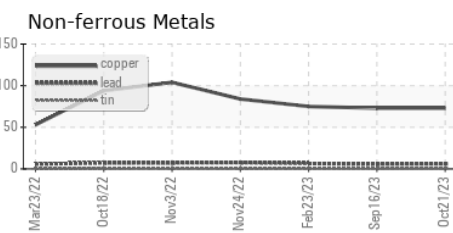
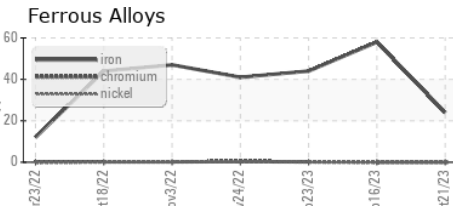
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	200	171	212

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013344 **Received** : 01 Nov 2023
Lab Number : 05996258 **Diagnosed** : 03 Nov 2023
Unique Number : 10724618 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: PrtCount)

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 HERMOSILLO,
 MX 83140
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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)