

OIL ANALYSIS REPORT

GUAY SON [CONHER] **BM NAINARI IBACO BM NAINARI**

Transmission (Manual)

RALOY SAE 50 (60 LTR)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Fluid: Raloy SAE 50)

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.

| | | Mar2022 | Oct2022 Feb2023 Apr20 | 23 Sep 2023 Nov 2023 Feb 2024 | 4 Mar/2024 | |
|---|--|---|--|---|--|--|
| | | MOLOLL | rototo rento | 092020 100202 | · mazozi | |
| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | KL0014526 | KL0014138 | KL0013407 |
| Sample Date | | Client Info | | 20 Mar 2024 | 06 Feb 2024 | 14 Nov 2023 |
| Machine Age | hrs | Client Info | | 0 | 20451 | 19549 |
| Oil Age | hrs | Client Info | | 509 | 610 | 1208 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | ATTENTION | ATTENTION |
| CONTAMINATION | | 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 | <1 | 2 | 0 |
| Chromium | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >7 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m | >45 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | | 6 | 12 | 9 |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| | рріп | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| | | | | ^ | | 0 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | U |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | | 0 | 0 | 0 |
| | | | | | | |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium Molybdenum | ppm | ASTM D5185m ASTM D5185m | | 0 | 0 | 0 |
| Barium Molybdenum Manganese | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | | 0 0 <1 | 0 0 <1 | 0 0 <1 |
| Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 0 <1 8 | 0 0 <1 6 | 0 0 <1 8 |
| Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 0 <1 8 3357 | 0 0 <1 6 3124 | 0 0 <1 8 3263 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 0 <1 8 3357 1026 | 0 0 <1 6 3124 909 | 0 0 <1 8 3263 991 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 0 <1 8 3357 1026 843 | 0 0 <1 6 3124 909 728 | 0 0 <1 8 3263 991 811 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm 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 >125 | 0 0 <1 8 3357 1026 843 8108 | 0 0 <1 6 3124 909 728 4952 | 0 0 <1 8 3263 991 811 5388 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 0 -<1 8 3357 1026 843 8108 | 0 0 0 <1 6 3124 909 728 4952 history1 | 0 0 0 <1 8 3263 991 811 5388 history2 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | >125 | 0 0 -<1 8 3357 1026 843 8108 current | 0 0 0 <1 6 3124 909 728 4952 history1 | 0 0 0 <1 8 3263 991 811 5388 history2 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium | ppm | ASTM D5185m | >125 | 0 0 0 <1 8 3357 1026 843 8108 current 8 | 0 0 0 <1 6 3124 909 728 4952 history1 6 | 0 0 0 <1 8 3263 991 811 5388 history2 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium | ppm | ASTM D5185m | >125 >20 | 0 0 0 <1 8 3357 1026 843 8108 current 8 3 | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI | ppm | ASTM D5185m | >125 >20 limit/base | 0 0 -<1 8 3357 1026 843 8108 current 8 3 0 | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 0 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 1 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm | ppm | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >125 >20 limit/base | 0 0 0 <1 8 3357 1026 843 8108 current 8 3 0 | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 0 history1 22130 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 1 history2 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >6µm | ppm | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >125 >20 limit/base >2500 | 0 0 0 <1 8 3357 1026 843 8108 current 8 3 0 current | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 0 history1 22130 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 1 history2 12846 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >14µm | ppm | ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 | >125 >20 limit/base >2500 >320 | 0 0 0 <1 8 3357 1026 843 8108 current 8 3 0 current 1095 236 31 | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 0 history1 22130 2975 191 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 1 history2 12846 3573 228 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >14µm Particles >21µm | ppm | ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 | >125 >20 limit/base >2500 >320 >80 >20 | 0 0 0 <1 8 3357 1026 843 8108 current 8 3 0 current 1095 236 31 | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 0 history1 22130 2975 191 41 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 1 history2 12846 3573 228 38 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >6µm Particles >21µm Particles >38µm | ppm | ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | >125 >20 limit/base >2500 >320 >80 >20 | 0 0 0 <1 8 3357 1026 843 8108 current 8 3 0 current 1095 236 31 9 | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 0 history1 22130 2975 191 41 1 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 1 history2 12846 3573 228 38 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm | ppm | ASTM D5185m METHOD ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | >125 >20 limit/base >2500 >320 >80 >20 >4 | 0 0 0 <1 8 3357 1026 843 8108 current 8 3 0 current 1095 236 31 9 1 | 0 0 0 <1 6 3124 909 728 4952 history1 6 2 0 history1 22130 2975 191 41 1 0 | 0 0 0 <1 8 3263 991 811 5388 history2 5 2 1 history2 12846 3573 228 38 1 |

Acid Number (AN)

mg KOH/g ASTM D8045

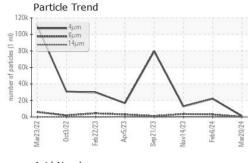
0.68

0.89

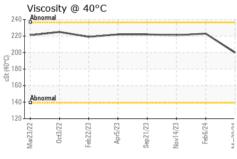
0.83

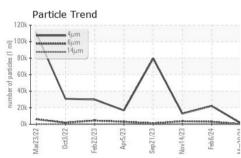


OIL ANALYSIS REPORT



| Acid | d Num | ber | | | | | |
|------------------------|-----------|----------|---------|------------|----------|----------|----------|
| Acid Number (mg KOH/g) | \bigvee | _ | \ | | ^ | \ | |
| Mar23/22 | 0ct3/22 | Feb22/23 | Apr5/23 | Sep21/23 - | Nov14/23 | Feb6/24 | Mar20/24 |





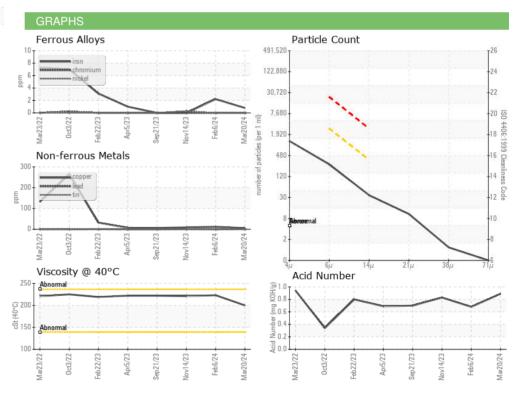
| VISUAL | | method | | | | history2 |
|-------------------------|--------|-------------|-------------------|-------|-------------------|-----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | 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 |
| | | ام مالم مما | Proc 24 /lean and | | la i a t a un urd | histom (O |

| I LOID I HOI LI | THES | memou | | Thatary | HISTOLYZ |
|-----------------|------|-----------|-----|---------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 200 | 223 | 221 |

| SAMPLE IMAGE | |
|--------------|--|
| | |

Bottom

Color







Certificate 12367

Laboratory Sample No.

: KL0014526 Lab Number : 06153076 Unique Number : 10983154

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

Received **Tested** Diagnosed

: 18 Apr 2024 : 19 Apr 2024

: 22 Apr 2024 - Angela Borella

MX 83140 Contact: EDUARDO GARCIA egarcia.comsa@gmail.com T: (526)622-1581 x:81

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)

Test Package : MOB 2 (Additional Tests: PrtCount)

F: x: Submitted By: EDUARDO GARCIA

CONOR JUAREZ 348

HERMOSILLO,