



| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Area
VIRGINIA INGRAM
Machine Id
[VIRGINIA INGRAM] 010 661437-10
Component
Steering
Fluid
CHEVRON RANDO HDZ 68 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW0068874 | MW0054159 | MW0048862 |
| Sample Date | | Client Info | | 01 Jul 2024 | 30 Dec 2023 | 30 Jun 2023 |
| Machine Age | hrs | Client Info | | 44164 | 41367 | 41338 |
| Oil Age | hrs | Client Info | | 44164 | 41367 | 41338 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 0 | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >15 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >5 | 1 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >10 | 1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >50 | 28 | 28 | 30 |
| Tin | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

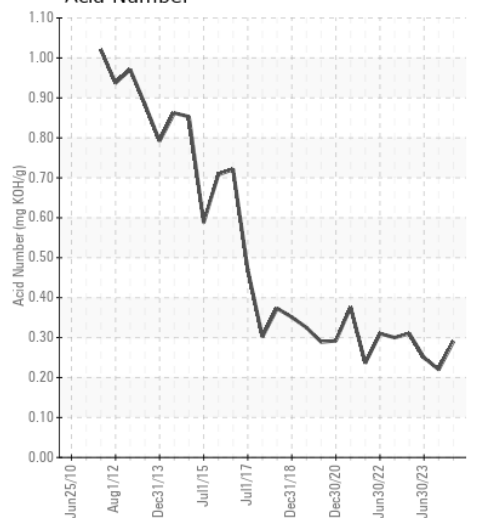
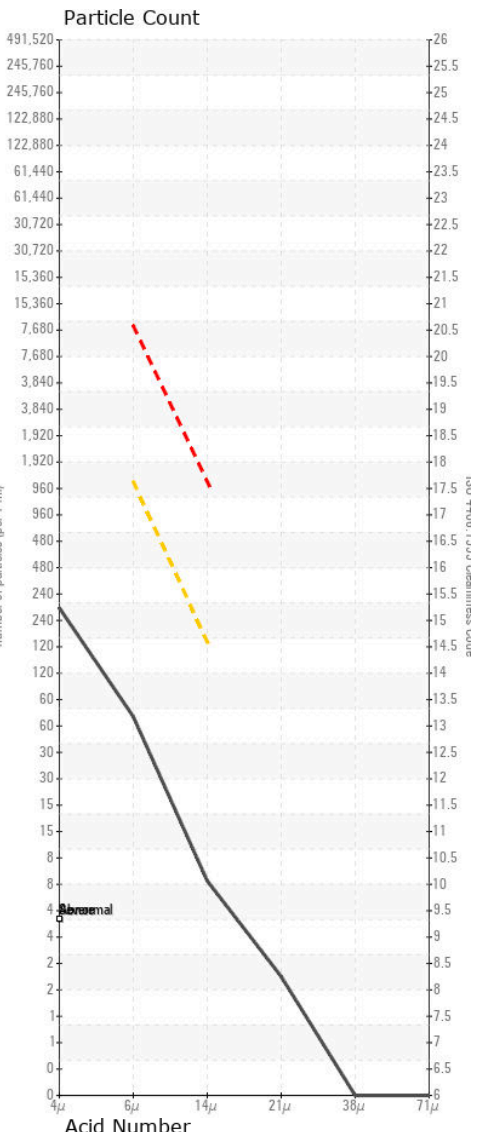
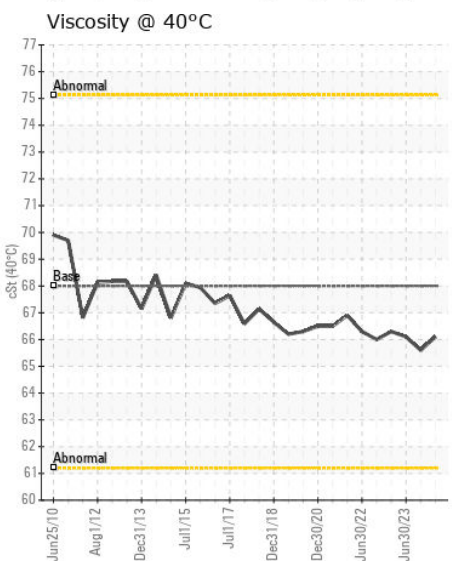
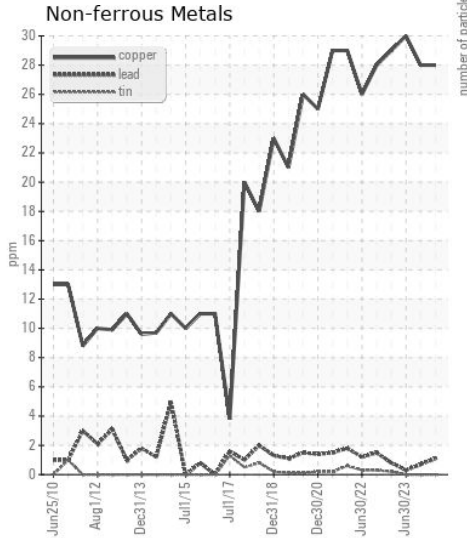
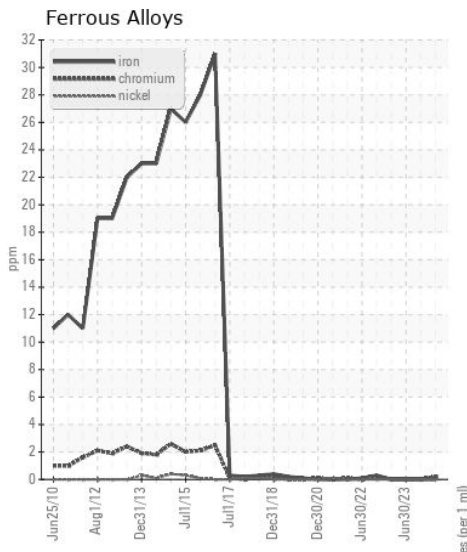
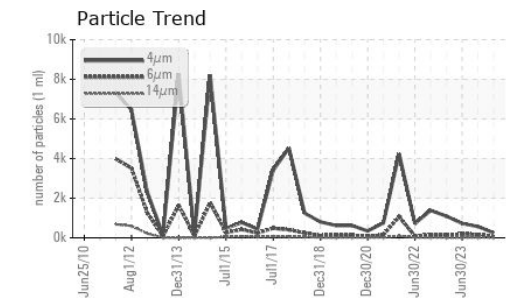
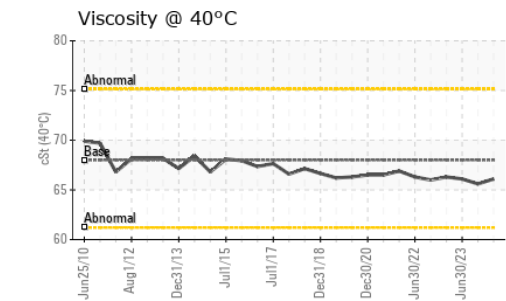
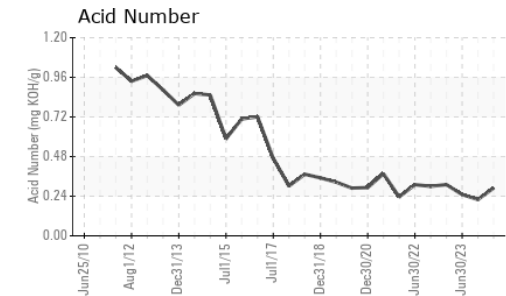
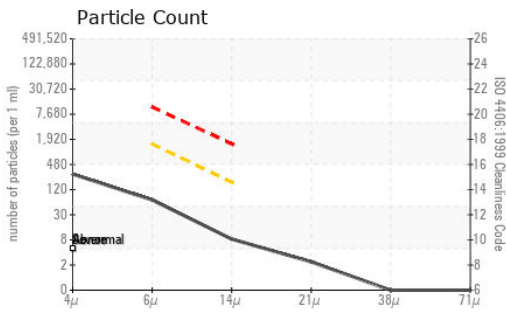
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|--------------|----------|-----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >15 | <1 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | <1 | 0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | | 249 | 572 | 723 |
| Particles >6µm | | ASTM D7647 | >1300 | 60 | 170 | 188 |
| Particles >14µm | | ASTM D7647 | >160 | 7 | 17 | 13 |
| Particles >21µm | | ASTM D7647 | >40 | 2 | 4 | 3 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >-/17/14 | 15/13/10 | 16/15/11 | 17/15/11 |
| 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 | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 0 | <1 | 1 |
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 0 | <1 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | 75 | 26 | 34 | 36 |
| Phosphorus | ppm | ASTM D5185m | 275 | 344 | 385 | 354 |
| Zinc | ppm | ASTM D5185m | 350 | 418 | 438 | 387 |
| Sulfur | ppm | ASTM D5185m | 550 | 954 | 1080 | 948 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.29 | 0.22 | 0.25 |
| Visc @ 40°C | cSt | ASTM D445 | 68.0 | 66.1 | 65.6 | 66.1 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0068874 **Received** : 08 Jul 2024
Lab Number : 06230744 **Tested** : 10 Jul 2024
Unique Number : 11114237 **Diagnosed** : 10 Jul 2024 - Jonathan Hester
Test Package : MAR 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)

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