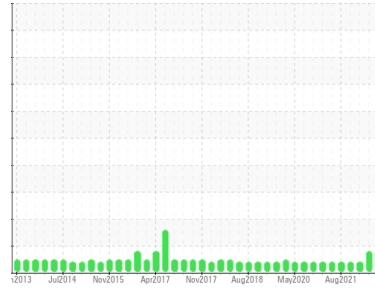




PROBLEM SUMMARY

Sample Rating Trend



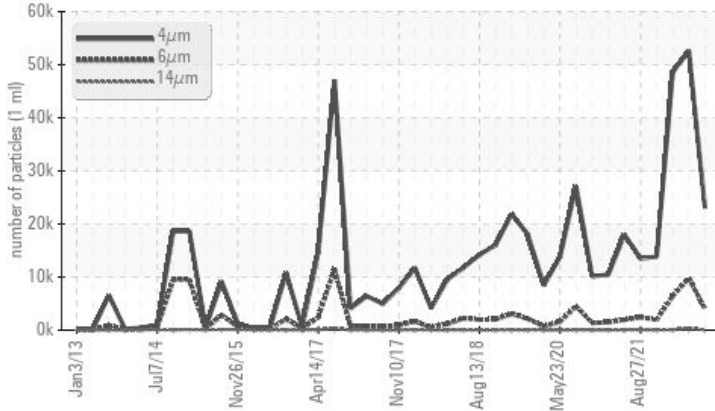
ISO



Machine Id
CVA
 Component
Hydraulic System
 Fluid
CHEVRON RANDO HD 68 (150 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

No corrective action is recommended at this time.
 Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | | ABNORMAL | ABNORMAL | ABNORMAL |
|-----------------|------------------------|-------------------|------------|------------|
| Particles >6µm | ASTM D7647 >1300 | ▲ 4018 | ▲ 9773 | ▲ 6417 |
| Oil Cleanliness | ISO 4406 (c) >--/17/14 | ▲ 22/19/13 | ▲ 23/20/15 | ▲ 23/20/13 |

Customer Id: AMESAI
 Sample No.: MW0043602
 Lab Number: 05670870
 Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

10 Apr 2022 Diag: Doug Bogart

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



03 Apr 2022 Diag: Doug Bogart

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



29 Nov 2021 Diag: Doug Bogart

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

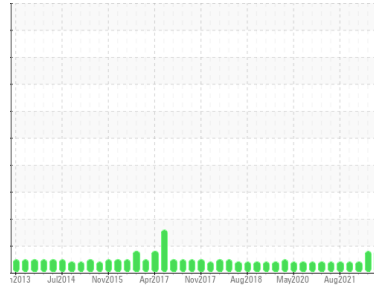
view report





OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
CVA
 Component
Hydraulic System
 Fluid
CHEVRON RANDO HD 68 (150 GAL)

DIAGNOSIS

Recommendation
 No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of silt (particulates < 14 microns in size) present in the oil.

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | MW0043602 | MW0025220 | MW0031370 |
| Sample Date | Client Info | | 27 Sep 2022 | 10 Apr 2022 | 03 Apr 2022 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 48825 | 38057 | 39537 |
| Oil Changed | Client Info | | Not Chngd | N/A | Not Chngd |
| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|---------|----------|----------|
| Iron | ppm | ASTM D5185m >20 | <1 | 1 | 2 |
| Chromium | ppm | ASTM D5185m >10 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >10 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >20 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m >10 | 0 | 0 | 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 |
|------------|--------|-------------|---------|----------|----------|
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | 41 | 39 | 39 |
| Phosphorus | ppm | ASTM D5185m | 310 | 294 | 297 |
| Zinc | ppm | ASTM D5185m | 411 | 393 | 399 |
| Sulfur | ppm | ASTM D5185m | 917 | 566 | 604 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|---------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 0 | <1 | 0 |
| Sodium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Potassium | ppm | ASTM D5185m >20 | <1 | <1 | <1 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | | 23055 | 52568 | 48614 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 4018 | ▲ 9773 | ▲ 6417 |
| Particles >14µm | ASTM D7647 | >160 | 42 | ▲ 308 | 65 |
| Particles >21µm | ASTM D7647 | >40 | 5 | 38 | 9 |
| Particles >38µm | ASTM D7647 | >10 | 0 | 2 | 0 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >--/17/14 | ▲ 22/19/13 | ▲ 23/20/15 | ▲ 23/20/13 |

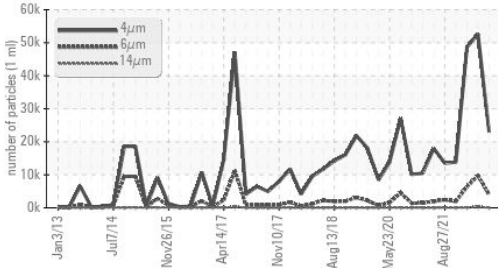
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.40 | 0.35 | 0.34 |

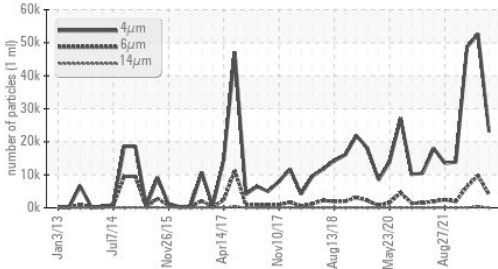


OIL ANALYSIS REPORT

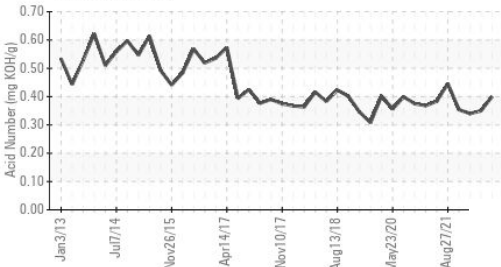
Particle Trend



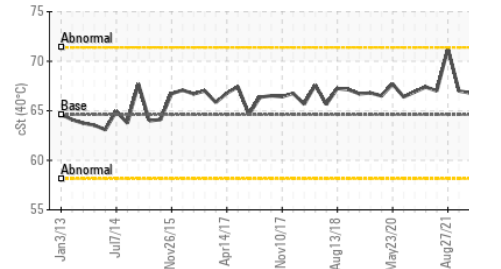
Particle Trend



Acid Number



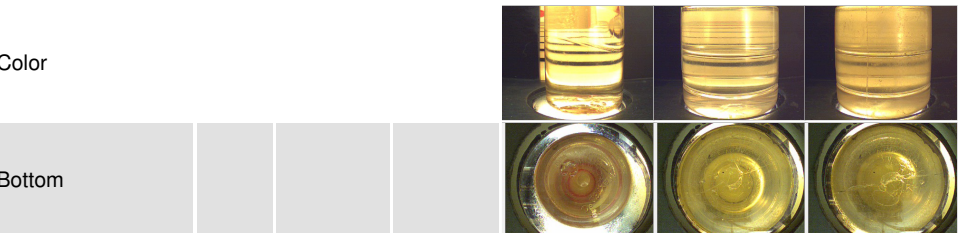
Viscosity @ 40°C



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | VLITE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | VLITE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

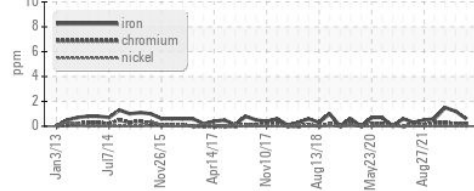
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 64.6 | 66.6 | 66.7 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

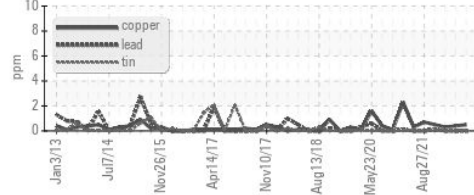


GRAPHS

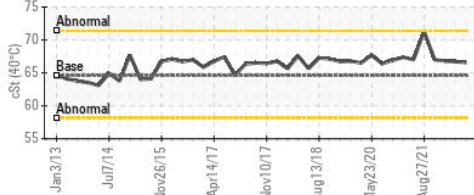
Ferrous Alloys



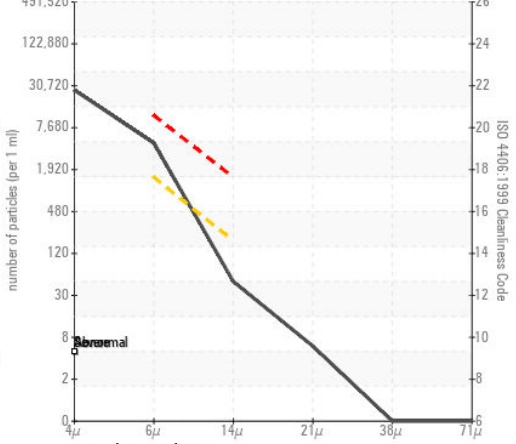
Non-ferrous Metals



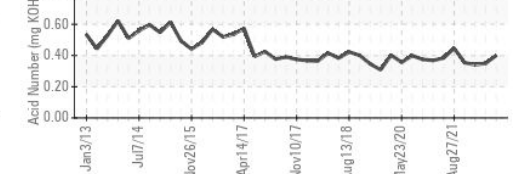
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0043602 **Received** : 19 Oct 2022
Lab Number : 05670870 **Diagnosed** : 20 Oct 2022
Unique Number : 10180440 **Diagnostician** : Don Baldrige
Test Package : MAR 2

AMERICAN RIVER TRANSPORTATION CO.
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 ST. LOUIS, MO
 US 63111
 Contact: JOSH BARRETT
 joshua.barrett@adm.com
 T:
 F: (314)481-5278

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)