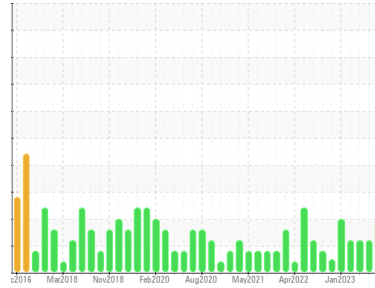




PROBLEM SUMMARY

Sample Rating Trend

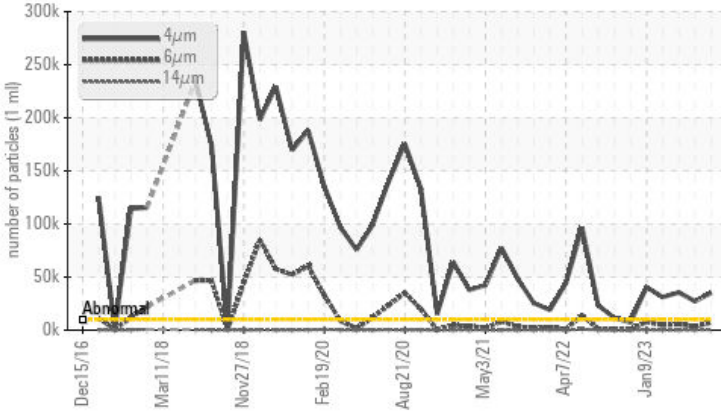
ISO



Area
MP-134 [10023448890]
 Machine Id
B41828 - MP MARLEN HYDRAULIC POWER UNIT (S/N 631-952)
 Component
Hydraulic System
 Fluid
PETRO CANADA PURITY FG AW HYDRAULIC 46 (60 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |
|-----------------|--------------|-----------|------------|------------|------------|
| Particles >4µm | ASTM D7647 | >10000 | ▲ 35073 | ▲ 27225 | ▲ 35589 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 7195 | ▲ 3583 | ▲ 5648 |
| Particles >14µm | ASTM D7647 | >160 | ▲ 402 | 90 | 116 |
| Particles >21µm | ASTM D7647 | >40 | ▲ 119 | 14 | 13 |
| Oil Cleanliness | ISO 4406 (c) | >20/17/14 | ▲ 22/20/16 | ▲ 22/19/14 | ▲ 22/20/14 |

Customer Id: HORAUS
 Sample No.: WC0820561
 Lab Number: 05932128
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---------------|--------|------|---------|---|
| Change Filter | --- | --- | ? | We recommend you service the filters on this component. |

HISTORICAL DIAGNOSIS

23 Jun 2023 Diag: Don Baldrige

ISO



We recommend you service the filters on this component if applicable. 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



26 Apr 2023 Diag: Don Baldrige

ISO



We recommend you service the filters on this component if applicable. 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



08 Mar 2023 Diag: Doug Bogart

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please note that this is a corrected copy for data entry updates. 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.

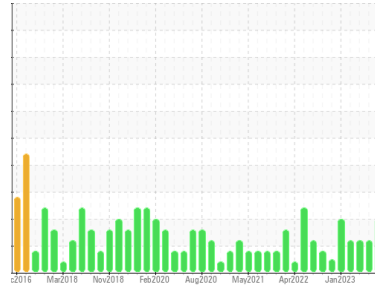
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
MP-134 [10023448890]
 Machine Id
B41828 - MP MARLEN HYDRAULIC POWER UNIT (S/N 631-952)
 Component
Hydraulic System
 Fluid
PETRO CANADA PURITY FG AW HYDRAULIC 46 (60 GAL)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of particulates 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 | WC0820561 | WC0820567 | WC0791987 |
| Sample Date | Client Info | 17 Aug 2023 | 23 Jun 2023 | 26 Apr 2023 |
| Machine Age | mths | Client Info | 0 | 0 |
| Oil Age | mths | Client Info | 0 | 0 |
| Oil Changed | Client Info | Not Changed | Not Changed | N/A |
| Sample Status | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >40 | 18 | 20 | 12 |
| Chromium | ppm | ASTM D5185m >4 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >4 | <1 | 0 | 0 |
| Lead | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >60 | 2 | 2 | 1 |
| Tin | ppm | ASTM D5185m >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | <1 | 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 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | 0 | 3 |
| Calcium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Phosphorus | ppm | ASTM D5185m | 456 | 497 | 417 |
| Zinc | ppm | ASTM D5185m | 0 | 1 | 0 |
| Sulfur | ppm | ASTM D5185m | 549 | 665 | 197 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|-----------------|----------|----------|----|
| Silicon | ppm | ASTM D5185m >20 | 3 | 3 | 4 |
| Sodium | ppm | ASTM D5185m | 1 | 2 | <1 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 0 | 0 |

FLUID CLEANLINESS

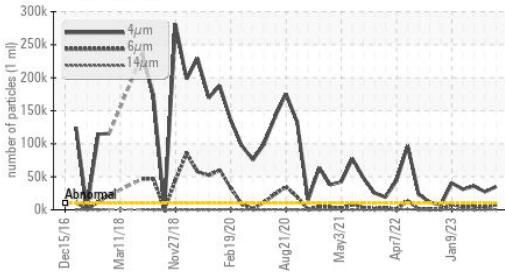
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 >10000 | ▲ 35073 | ▲ 27225 | ▲ 35589 |
| Particles >6µm | ASTM D7647 >1300 | ▲ 7195 | ▲ 3583 | ▲ 5648 |
| Particles >14µm | ASTM D7647 >160 | ▲ 402 | 90 | 116 |
| Particles >21µm | ASTM D7647 >40 | ▲ 119 | 14 | 13 |
| Particles >38µm | ASTM D7647 >10 | 8 | 1 | 1 |
| Particles >71µm | ASTM D7647 >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >20/17/14 | ▲ 22/20/16 | ▲ 22/19/14 | ▲ 22/20/14 |

FLUID DEGRADATION

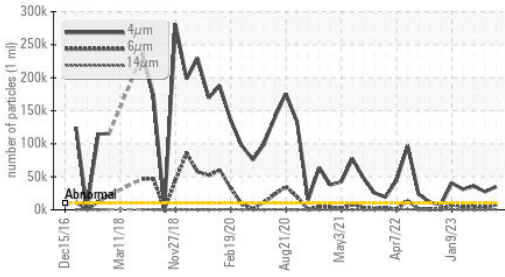
| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.26 | 0.20 | 0.20 | 0.21 |

OIL ANALYSIS REPORT

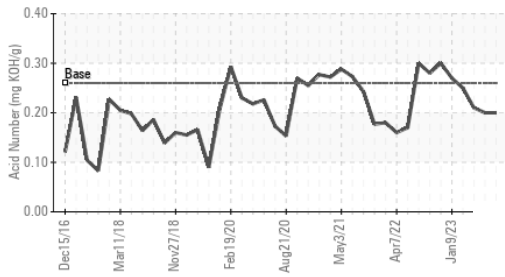
▲ Particle Trend



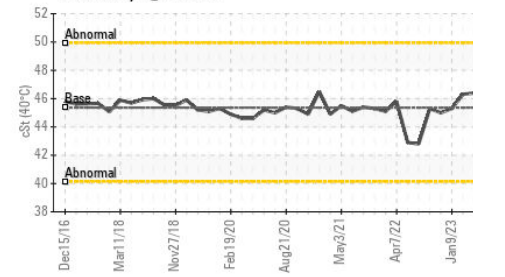
▲ Particle Trend



Acid Number



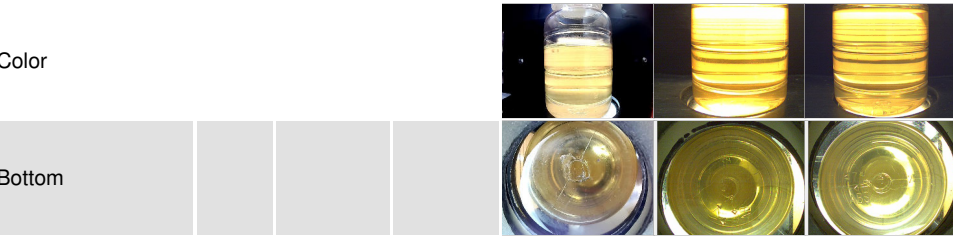
Viscosity @ 40°C



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

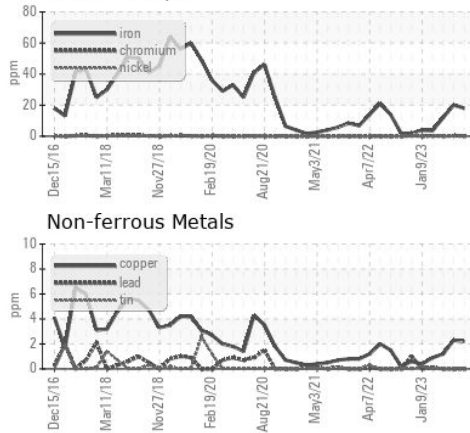
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 45.36 | 44.5 | 45.0 |

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

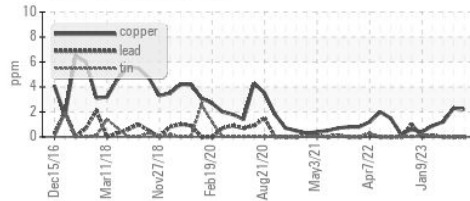


GRAPHS

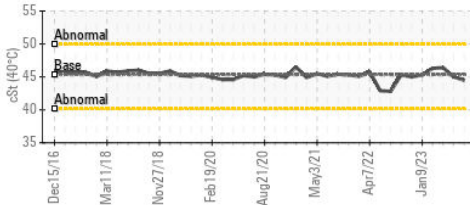
Ferrous Alloys



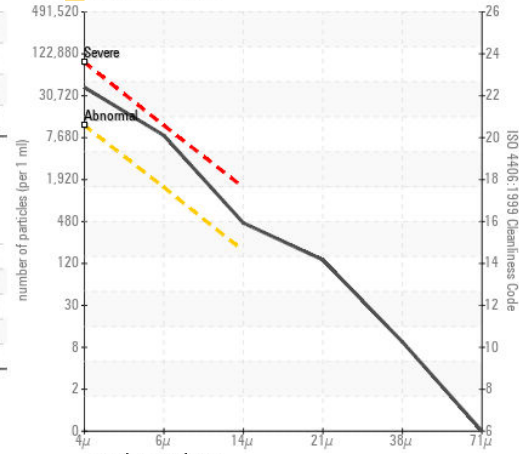
Non-ferrous Metals



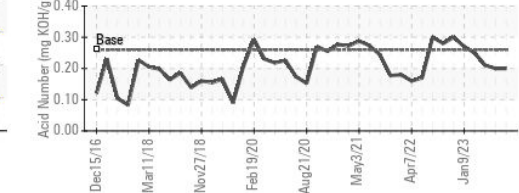
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0820561 **Received** : 23 Aug 2023
Lab Number : 05932128 **Diagnosed** : 24 Aug 2023
Unique Number : 10617399 **Diagnostician** : Doug Bogart
Test Package : IND 2

HORMEL FOODS - AUSTIN
 1101 NORTH MAIN ST
 AUSTIN, MN
 US 55912
 Contact: RYAN LOWE
 rslowe@hormel.com
 T: (507)437-5674
 F: (507)437-9805

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)