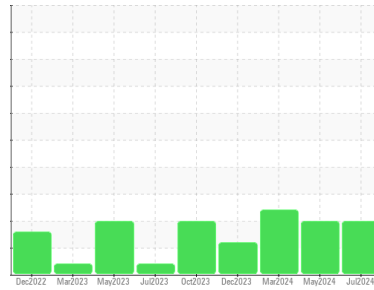




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Area

FP-110

Machine Id

B73017 - SOUTH HAARSLEV BONE RESIDUE

Component

Pump

Fluid

PETRO CANADA PURITY FG EP GEAR OIL 320 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water 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 | WC0943501 | WC0908037 | WC0894940 |
| Sample Date | Client Info | 17 Jul 2024 | 06 May 2024 | 03 Mar 2024 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|----------|----------|---|
| Iron | ppm | ASTM D5185m >90 | <1 | 1 | 2 |
| Chromium | ppm | ASTM D5185m >5 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m >3 | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >7 | 4 | 2 | 0 |
| Lead | ppm | ASTM D5185m >12 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m >30 | 4 | <1 | 0 |
| Tin | ppm | ASTM D5185m >9 | <1 | 0 | 0 |
| 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 | 17 | 23 | 21 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | <1 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Calcium | ppm | ASTM D5185m | 29 | 24 | 63 |
| Phosphorus | ppm | ASTM D5185m | 413 | 475 | 460 |
| Zinc | ppm | ASTM D5185m | 6 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 5338 | 6391 | 6037 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|----------|----------|---------|
| Silicon | ppm | ASTM D5185m >60 | 2 | 1 | 4 |
| Sodium | ppm | ASTM D5185m | 0 | 0 | 1 |
| Potassium | ppm | ASTM D5185m >20 | 2 | <1 | 0 |
| Water | % | ASTM D6304 >.1 | ▲ 0.172 | --- | ▲ 0.139 |
| ppm Water | ppm | ASTM D6304 >1000 | ▲ 1720 | --- | ▲ 1390 |

FLUID CLEANLINESS

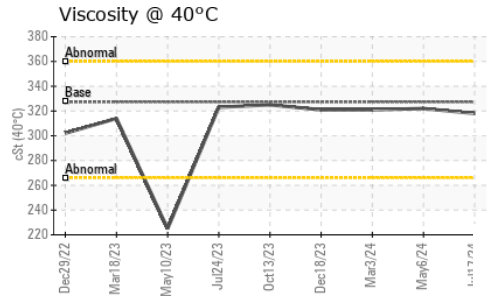
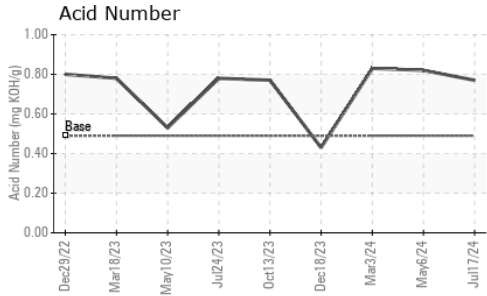
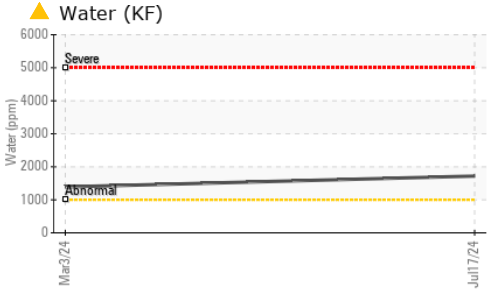
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|---------|------------|----------|
| Particles >4µm | ASTM D7647 >10000 | --- | ▲ 26145 | --- |
| Particles >6µm | ASTM D7647 >2500 | --- | ▲ 8643 | --- |
| Particles >14µm | ASTM D7647 >320 | --- | ▲ 864 | --- |
| Particles >21µm | ASTM D7647 >80 | --- | ▲ 247 | --- |
| Particles >38µm | ASTM D7647 >20 | --- | 14 | --- |
| Particles >71µm | ASTM D7647 >4 | --- | 2 | --- |
| Oil Cleanliness | ISO 4406 (c) >20/18/15 | --- | ▲ 22/20/17 | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|----------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.49 | 0.77 | 0.82 | 0.83 |



OIL ANALYSIS REPORT



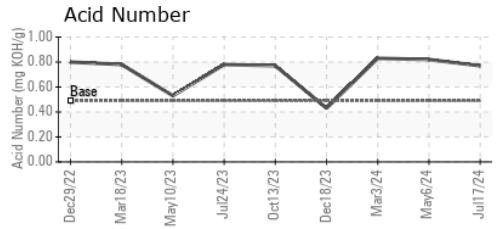
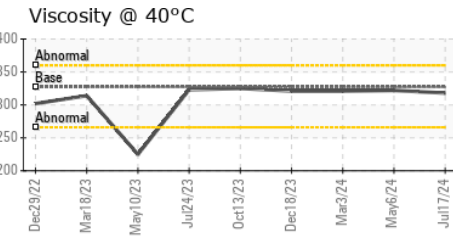
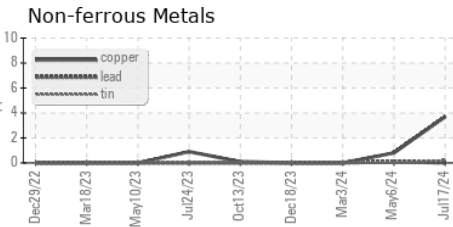
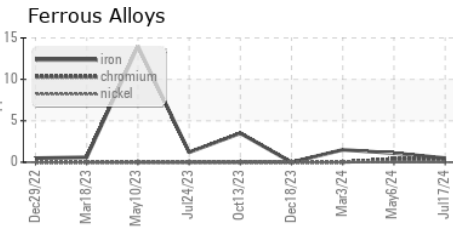
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | ▲ MODER |
| Debris | scalar | *Visual | ▲ MODER | 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 | >.1 | 0.2% | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 327.3 | 318 | 322 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0943501 **Received** : 18 Jul 2024
Lab Number : 06240301 **Tested** : 20 Jul 2024
Unique Number : 11129135 **Diagnosed** : 20 Jul 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

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)