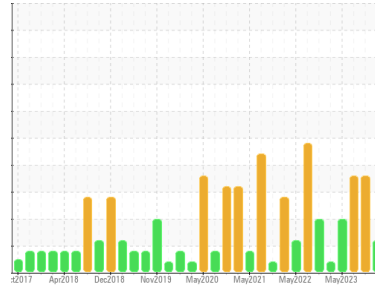




PROBLEM SUMMARY

Sample Rating Trend

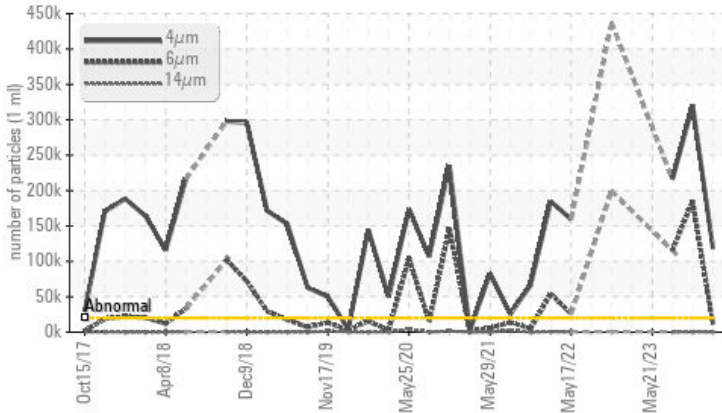
ISO



Area
FP-011
 Machine Id
A11620 - ALFA LAVAL SEPERATOR (S/N 42568)
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX SYNTHETIC EP 320 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

| Sample Status | | | ABNORMAL | SEVERE | SEVERE |
|-----------------|--------------|-----------|------------|------------|------------|
| Particles >4µm | ASTM D7647 | >20000 | ▲ 118360 | ● 320116 | ● 216073 |
| Particles >6µm | ASTM D7647 | >5000 | ▲ 11577 | ● 185112 | ● 115342 |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | ▲ 24/21/13 | ● 26/25/16 | ● 25/24/16 |

Customer Id: HORAUS
 Sample No.: WC0799667
 Lab Number: 05928133
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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. |
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |
| Information Required | --- | --- | ? | NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. |

HISTORICAL DIAGNOSIS

16 Jul 2023 Diag: Wes Davis

ISO



Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



25 Jun 2023 Diag: Wes Davis

ISO



Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



21 May 2023 Diag: Don Baldrige

WATER



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. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



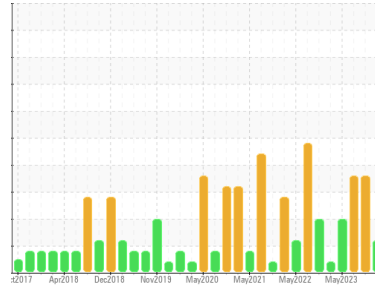


OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area
FP-011
 Machine Id
A11620 - ALFA LAVAL SEPERATOR (S/N 42568)
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX SYNTHETIC EP 320 (--- GAL)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0799667 | WC0826106 | WC0814181 |
| Sample Date | Client Info | | 19 Aug 2023 | 16 Jul 2023 | 25 Jun 2023 |
| Machine Age | days | Client Info | 0 | 0 | 0 |
| Oil Age | days | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | SEVERE | SEVERE |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >200 | 9 | 25 | 19 |
| Chromium | ppm | ASTM D5185m >15 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >15 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m >100 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >200 | 7 | 12 | 10 |
| Tin | ppm | ASTM D5185m >25 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m 33 | 14 | 30 | 18 |
| Barium | ppm | ASTM D5185m 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 5 | 1 | 3 | 4 |
| Calcium | ppm | ASTM D5185m 5 | 3 | 8 | 14 |
| Phosphorus | ppm | ASTM D5185m 437 | 305 | 347 | 342 |
| Zinc | ppm | ASTM D5185m 5 | 4 | 7 | 6 |
| Sulfur | ppm | ASTM D5185m 5000 | 20371 | 19762 | 18377 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 0 | 1 | <1 |
| Sodium | ppm | ASTM D5185m | 19 | 94 | 54 |
| Potassium | ppm | ASTM D5185m >20 | 11 | 43 | 31 |

FLUID CLEANLINESS

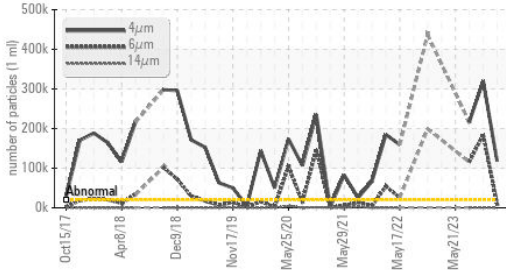
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >20000 | ▲ 118360 | ● 320116 | ● 216073 |
| Particles >6µm | ASTM D7647 | >5000 | ▲ 11577 | ● 185112 | ● 115342 |
| Particles >14µm | ASTM D7647 | >640 | 43 | 471 | 453 |
| Particles >21µm | ASTM D7647 | >160 | 8 | 18 | 18 |
| Particles >38µm | ASTM D7647 | >40 | 1 | 1 | 0 |
| Particles >71µm | ASTM D7647 | >10 | 1 | 1 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | ▲ 24/21/13 | ● 26/25/16 | ● 25/24/16 |

FLUID DEGRADATION

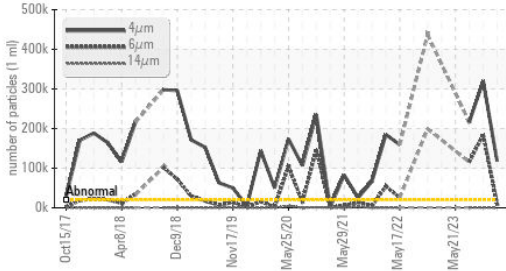
| | method | limit/base | current | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.7 | 0.59 | 0.52 | 0.50 |

OIL ANALYSIS REPORT

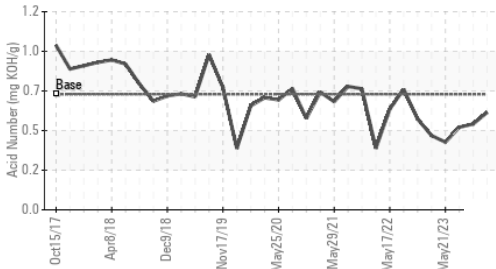
▲ Particle Trend



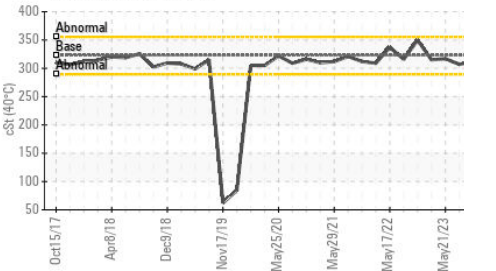
▲ Particle Trend



Acid Number



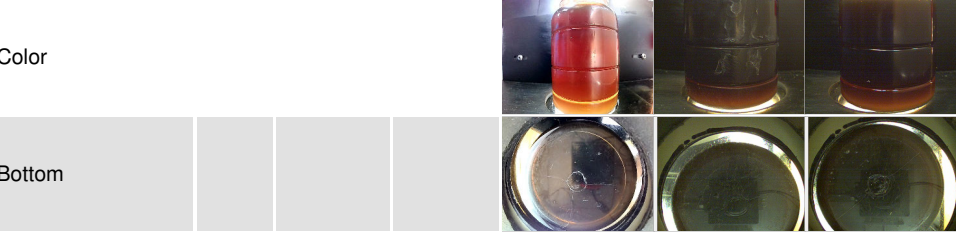
Viscosity @ 40°C



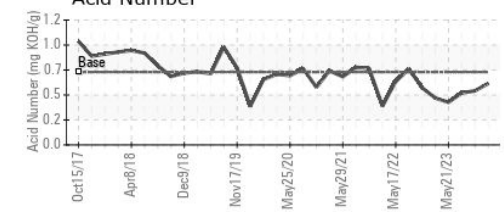
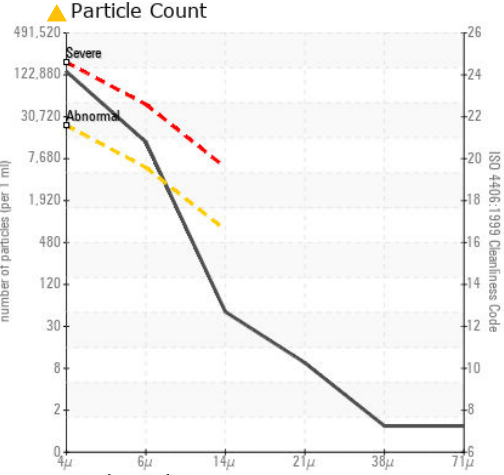
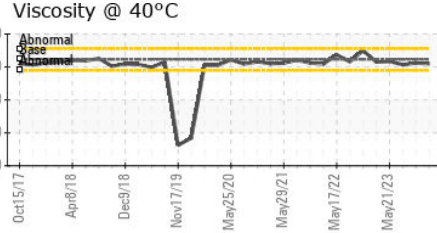
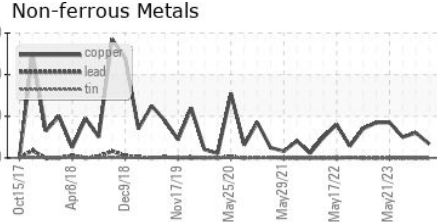
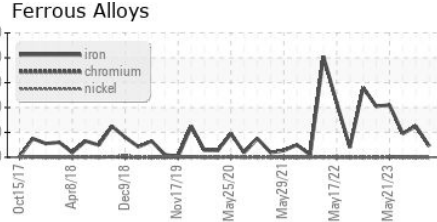
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 323 | 310 | 312 | 307 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0799667 **Received** : 18 Aug 2023
Lab Number : 05928133 **Diagnosed** : 21 Aug 2023
Unique Number : 10608080 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: 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)