

OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Component Gearbox Fluid

GEAR OIL ISO 320 (--- GAL)

DIAGNOSIS

A Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL ISO 320. Please confirm. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

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

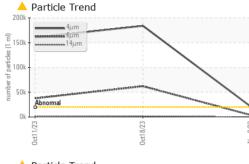
Fluid Condition

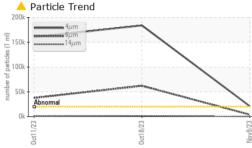
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

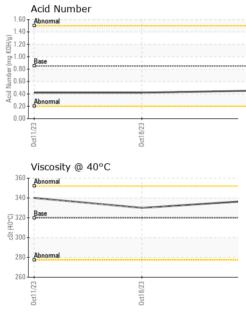
| | | Oct | 2023 | Oct2023 Nov20 | 23 | |
|------------------|----------|--------------|------------|-------------------|--------------|-------------|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | KL0013138 | KL0012963 | KL0012964 |
| Sample Date | | Client Info | | 09 Nov 2023 | 18 Oct 2023 | 11 Oct 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | ATTENTION | ABNORMAL | ABNORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >200 | 14 | 31 | 40 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <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 | >25 | 1 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >50 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >200 | <1 | 4 | 4 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| 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 | 50 | 2 | 3 | 3 |
| Barium | ppm | ASTM D5185m | 15 | 0 | 3 | 4 |
| Molybdenum | ppm | ASTM D5185m | 15 | <1 | 4 | 5 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 50 | 3 | 5 | 5 |
| Calcium | ppm | ASTM D5185m | 50 | 17 | 22 | 25 |
| Phosphorus | ppm | ASTM D5185m | 350 | 154 | 160 | 161 |
| Zinc | ppm | ASTM D5185m | 100 | 94 | 99 | 89 |
| Sulfur | ppm | ASTM D5185m | 12500 | 8703 | 9185 | 9197 |
| CONTAMINANTS | 6 | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >50 | 9 | 14 | 16 |
| Sodium | ppm | ASTM D5185m | | 12 | 49 | 52 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | 1 |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >20000 | A 21097 | ▲ 183930 | ▲ 160156 |
| Particles >6µm | | ASTM D7647 | >5000 | 3858 | <u> </u> | ▲ 37544 |
| Particles >14µm | | ASTM D7647 | >640 | 128 | 🔺 1543 | 6 53 |
| Particles >21µm | | ASTM D7647 | >160 | 22 | A 235 | 159 |
| Particles >38µm | | ASTM D7647 | >40 | 1 | 10 | 4 |
| Particles >71µm | | ASTM D7647 | >10 | 0 | 2 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | A 22/19/14 | ▲ 25/23/18 | ▲ 25/22/17 |
| FLUID DEGRADA | ATION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.85 | 0.45 | 0.42 | 0.42 |



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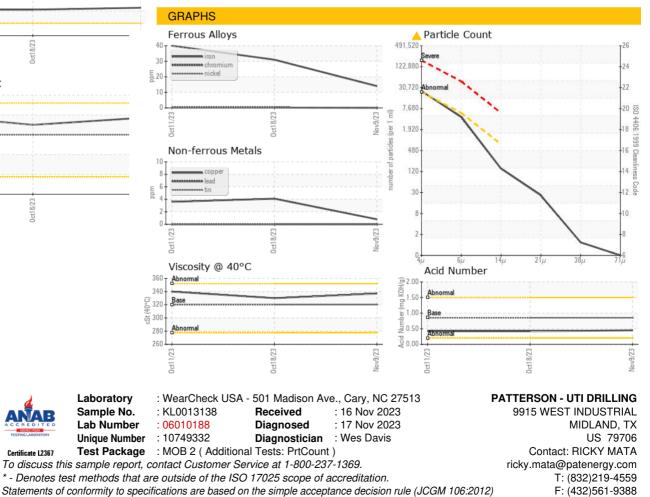






| VISUAL | | method | limit/base | current | history1 | history2 | |
|------------------|--------|-----------|------------|---------|----------|----------|--|
| White Metal | scalar | *Visual | NONE | NONE | MODER | NONE | |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE | |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE | |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE | |
| Debris | scalar | *Visual | NONE | LIGHT | 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 | |
| Free Water | scalar | *Visual | | NEG | NEG | NEG | |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 | |
| Visc @ 40°C | cSt | ASTM D445 | 320 | 337 | 330 | 340 | |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 | |
| Color Color | | | | | | | |

Bottom



Certificate L2367

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Submitted By: Mike Richardson

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