

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area COGEN 3 Machine Id 125GE14003 Component

Turbine Fluid ROYAL PURPLE SYNFILM 32 (500 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

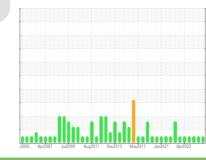
All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

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

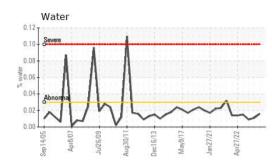


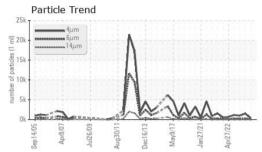


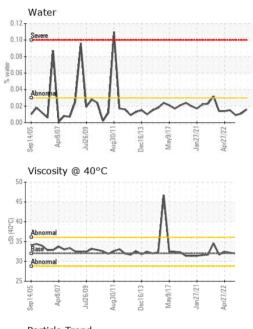
| SAMPLE INFORM | ΛΑΤΙΟΝ | method | | | | history2 |
|------------------|----------|--------------|-------------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | RP0027132 | RP0027118 | RP0019538 |
| Sample Date | | Client Info | | 18 Jul 2023 | 12 Apr 2023 | 16 Jan 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 | | | | NORMAL | NORMAL | NORMAL |
| WEAR METALS | | mathad | limit/base | ourropt | biotorut | biotom/0 |
| | | method | | | history1 | history2 |
| Iron | ppm | ASTM D5185m | >15 | <1 | 0 | 0 |
| Chromium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 1 | 0 | 0 |
| Lead | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >5 | 46 | 37 | 25 |
| Tin | ppm | ASTM D5185m | >5 | 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 | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 90 | 53 | 64 | 45 |
| Calcium | ppm | ASTM D5185m | | <1 | 0 | 1 |
| Phosphorus | ppm | ASTM D5185m | | <1 | <1 | 38 |
| Zinc | ppm | ASTM D5185m | | 0 | 0 | 12 |
| CONTAMINANTS | | | line it /le e e e | | | |
| | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | 2 | 2 | 1 |
| Sodium | ppm | ASTM D5185m | | 0 | 2 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | <1 | 0 |
| Water | % | ASTM D6304 | | 0.016 | 0.011 | 0.009 |
| ppm Water | ppm | ASTM D6304 | >300 | 165.9 | 110.2 | 98.6 |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | | 373 | 1506 | 980 |
| Particles >6µm | | ASTM D7647 | >1300 | 65 | 265 | 257 |
| Particles >14µm | | ASTM D7647 | >160 | 7 | 15 | 12 |
| Particles >21µm | | ASTM D7647 | >40 | 2 | 6 | 2 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >/17/14 | 16/13/10 | 18/15/11 | 17/15/11 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.33 | 0.32 | 0.40 |

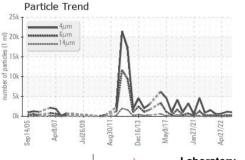


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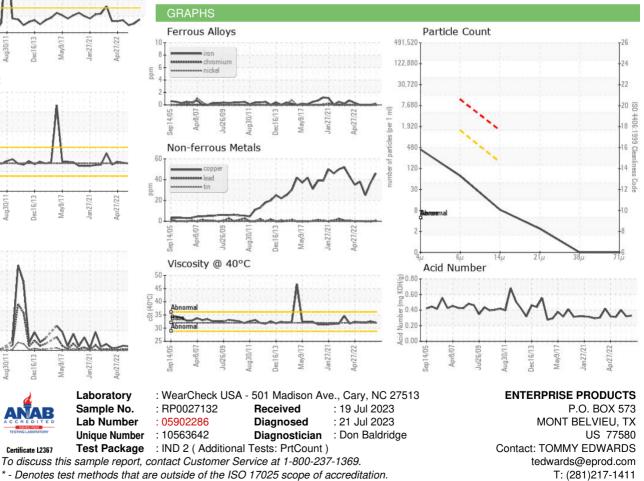






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| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | 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 | >0.03 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPER | TIES | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D445 | 32 | 32.0 | 32.5 | 32.0 |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
| Color | | | | TES State St | | |
| Bottom | | | | | | |



* - 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)

Certificate L2367

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