

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend





### ROYAL PURPLE SYNFILM 32 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

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

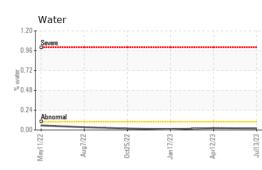
#### Fluid Condition

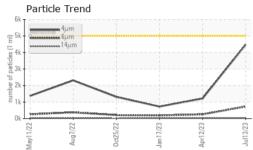
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

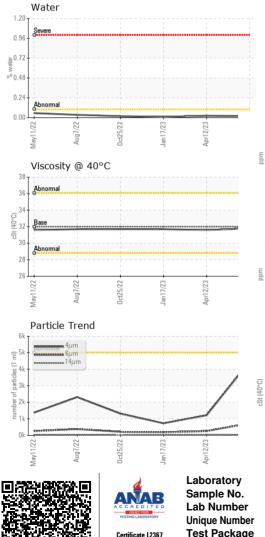
|                  |          | May2022      | AugŹ022 OctŹ022 | Jan2023 Apr2023 | Jul2023     |             |
|------------------|----------|--------------|-----------------|-----------------|-------------|-------------|
| SAMPLE INFORM    | IATION   | method       | limit/base      | current         | history1    | history2    |
| Sample Number    |          | Client Info  |                 | RP0032228       | RP0032119   | RP0027100   |
| Sample Date      |          | Client Info  |                 | 13 Jul 2023     | 12 Apr 2023 | 17 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      |          | method       | limit/base      | current         | history1    | history2    |
| Iron             | ppm      | ASTM D5185m  | >20             | 1               | <1          | 3           |
| Chromium         | ppm      | ASTM D5185m  | >20             | 0               | 0           | 0           |
| Nickel           | ppm      | ASTM D5185m  | >20             | <1              | 0           | 0           |
| Titanium         | ppm      | ASTM D5185m  |                 | 0               | 0           | 0           |
| Silver           | ppm      | ASTM D5185m  |                 | 0               | 0           | 0           |
| Aluminum         | ppm      | ASTM D5185m  | >20             | <1              | <1          | 0           |
| Lead             | ppm      | ASTM D5185m  | >20             | <1              | 0           | <1          |
| Copper           | ppm      | ASTM D5185m  | >20             | 10              | 10          | 19          |
| Tin              | ppm      | ASTM D5185m  | >20             | <1              | 0           | <1          |
| 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  |                 | 2               | 0           | 0           |
| Molybdenum       | ppm      | ASTM D5185m  |                 | 0               | 0           | 0           |
| Manganese        | ppm      | ASTM D5185m  |                 | 0               | <1          | 0           |
| Magnesium        | ppm      | ASTM D5185m  | 90              | 84              | 84          | 76          |
| Calcium          | ppm      | ASTM D5185m  |                 | 5               | 6           | 4           |
| Phosphorus       | ppm      | ASTM D5185m  |                 | 18              | 26          | 37          |
| Zinc             | ppm      | ASTM D5185m  |                 | 26              | 29          | 52          |
| CONTAMINANTS     |          | method       | limit/base      | current         | history1    | history2    |
| Silicon          | ppm      | ASTM D5185m  | >15             | 6               | 5           | 7           |
| Sodium           | ppm      | ASTM D5185m  |                 | <1              | 3           | <1          |
| Potassium        | ppm      | ASTM D5185m  | >20             | 1               | 1           | 3           |
| Water            | %        | ASTM D6304   |                 | 0.019           | 0.023       | 0.009       |
| ppm Water        | ppm      | ASTM D6304   |                 | 192.8           | 238.0       | 92.1        |
| FLUID CLEANLIN   | ESS      | method       | limit/base      | current         | history1    | history2    |
| Particles >4µm   |          | ASTM D7647   | >5000           | 4475            | 1215        | 725         |
| Particles >6µm   |          | ASTM D7647   | >1300           | 729             | 255         | 191         |
| Particles >14µm  |          | ASTM D7647   | >160            | 31              | 28          | 27          |
| Particles >21µm  |          | ASTM D7647   | >40             | 12              | 7           | 11          |
| Particles >38µm  |          | ASTM D7647   | >10             | 0               | 0           | 1           |
| Particles >71µm  |          | ASTM D7647   | >3              | 0               | 0           | 0           |
| Oil Cleanliness  |          | ISO 4406 (c) | >19/17/14       | 19/17/12        | 17/15/12    | 17/15/12    |
| FLUID DEGRADA    |          | method       | limit/base      | current         | history1    | history2    |
| Acid Number (AN) | mg KOH/g | ASTM D8045   |                 | 0.38            | 0.36        | 0.34        |
|                  |          |              |                 |                 |             |             |



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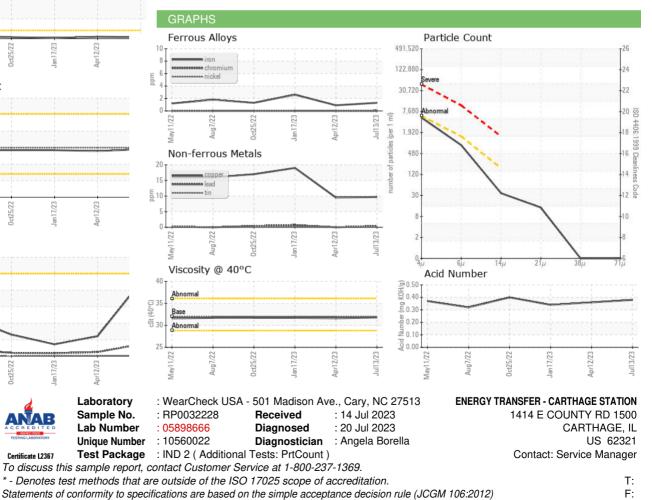






| VISUAL           |        | method    | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual   | 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   |            | NEG     | NEG      | NEG      |
| Free Water       | scalar | *Visual   |            | NEG     | NEG      | NEG      |
| FLUID PROPERTIES |        | method    | limit/base | current | history1 | history2 |
| Visc @ 40°C      | cSt    | ASTM D445 | 32         | 31.8    | 31.6     | 31.7     |
| SAMPLE IMAGES    |        | method    | limit/base | current | history1 | history2 |
| Color            |        |           |            |         |          | 3        |

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Contact/Location: Service Manager - ENECARIL