

#### TSCC #1976 [298579] Machine Id MAGNA PLUS RG6081A177542 Component Coolant Fluid HYBRID (HOAT) COOLANT (--- GAL)

### RECOMMENDATION

The coolant change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| CO | RR | OS | ION |
|----|----|----|-----|
|    |    |    |     |

The iron level is high indicating rust in the system which clogs the cooling system.

### **CONTAMINANTS**

There is no indication of any contamination in the component(unconfirmed).

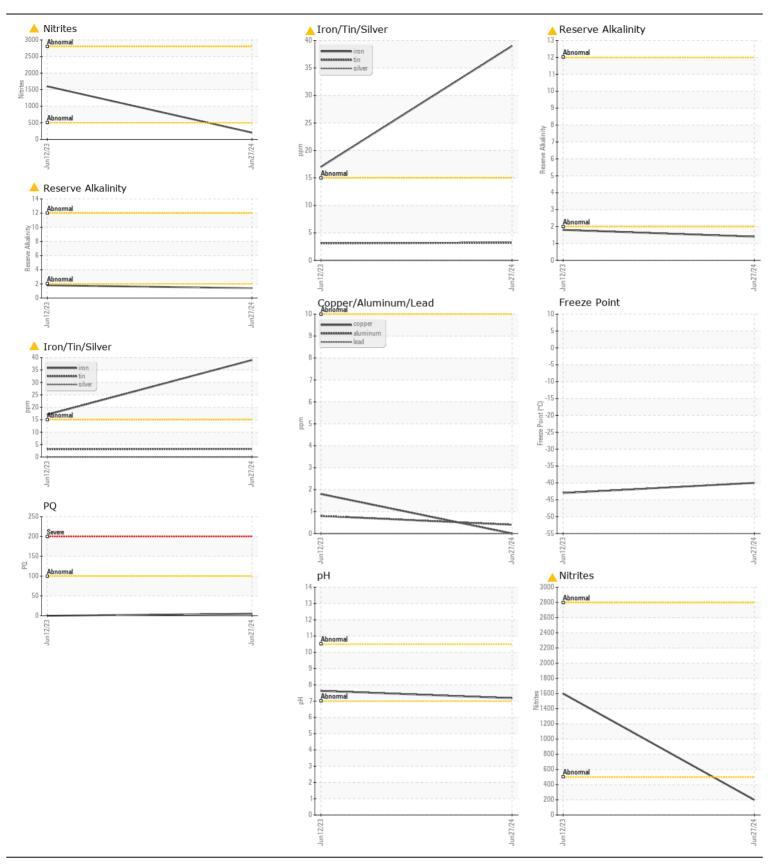
## **COOLANT CONDITION**

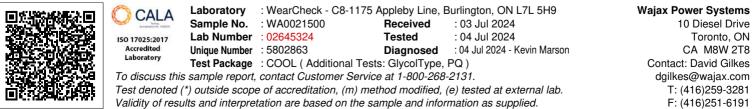
The reserve alkalinity of this fluid is lower than acceptable. The coolant is cloudy indicating either an overconcentration of coolant additives, or a mixing of incompatible coolant technologies. The low nitrite level indicates reduced cavitation protection which leads to corrosion and ammonia formation. The pH level of this fluid is within the acceptable limits.

| Test               | UOM        | Method          | Limit/Abn | Current     | History1    | History2 |
|--------------------|------------|-----------------|-----------|-------------|-------------|----------|
| Sample Number      |            | Client Info     |           | WA0021500   | WA0019524   |          |
| Sample Date        |            | Client Info     |           | 27 Jun 2024 | 12 Jun 2023 |          |
| Machine Age        | hrs        | Client Info     |           | 64          | 61          |          |
| Oil Age            | hrs        | Client Info     |           | 0           | 0           |          |
| Oil Changed        |            | Client Info     |           | Changed     | Changed     |          |
| Sample Status      |            |                 |           | ABNORMAL    | ABNORMAL    |          |
| Iron               | ppm        | ASTM D5185(m)   | >15       | <b>A</b> 39 | ▲ 17        |          |
| Aluminum           | ppm        | ASTM D5185(m)   | >10       | <1          | <1          |          |
| Copper             | ppm        | ASTM D5185(m)   | >10       | 0           | 2           |          |
| Lead               | ppm        | ASTM D5185(m)   | >10       | 0           | 0           |          |
| Tin                | ppm        | ASTM D5185(m)   | >10       | 3           | 3           |          |
| Silver             |            | ASTM D5185(m)   | >10       | 0           | 0           |          |
| Zinc               | ppm        | ASTM D5185(m)   | >10       | 2           | 3           |          |
|                    | ppm        | ASTN D3103(III) | >10       |             |             |          |
| Calcium            | ppm        | ASTM D5185(m)   | >100      | 4           | 8           |          |
| Magnesium          | ppm        | ASTM D5185(m)   | >40       | <1          | 3           |          |
| Appearance         | scalar     | Visual*         | NORML     | NORML       | NORML       |          |
| Odor               | scalar     | Visual*         | NORML     | NORML       | NORML       |          |
| Coolant Appearance |            | Visual*         | Clear     | 🔺 Cloudy    | Clear       |          |
| Boiling Point      | °C         | WC Method*      |           | 108         |             |          |
| Specific Gravity   |            | ASTM D1298*     |           | 1.070       | 1.072       |          |
| рН                 | Scale 0-14 | ASTM D1287*     |           | 7.18        | 7.63        |          |
| Nitrites           | ppm        | Alcan Test Kit* |           | <u> </u>    | 1600        |          |
| Reserve Alkalinity | Scale 0-20 | ASTM D1121*     |           | <b>1</b> .4 | 1.8         |          |
| Percentage Glycol  | %          | ASTM D3321*     |           | 52.5        | 53.6        |          |
| Freezing Point     | °C         | ASTM D3321*     |           | -40         | -43         |          |
| Carboxylate        |            |                 |           |             |             |          |
| Silicon            | ppm        | ASTM D5185(m)   |           | 8           | 7           |          |
| Phosphorus         | ppm        | ASTM D5185(m)   |           | 1           | 10          |          |
| Boron              | ppm        | ASTM D5185(m)   |           | 203         | 242         |          |
| Molybdenum         | ppm        | ASTM D5185(m)   |           | 3           | 1           |          |
| Sodium             | ppm        | ASTM D5185(m)   |           | 1873        | 1678        |          |
| Potassium          | ppm        | ASTM D5185(m)   |           | 74          | 77          |          |
| Coolant Color      |            | Visual*         |           | Orange      | Grn/Yellow  |          |
|                    |            |                 |           |             |             |          |

Contact/Location: David Gilkes - HARTOR Page 1 of 2

# CORROSION ABNORMAL CONTAMINANTS ABNORMAL COOLANT CONDITION ABNORMAL





Contact/Location: David Gilkes - HARTOR Page 2 of 2