

RIO AG20 WATER CIRCULATOR MAINTENANCE SCHEDULE Water Treatment Applications

The *Acqua & Co.* RIO AG20 Water Circulator is a heavy duty mechanical unit which is designed for continuous operation in both fresh and salt water environments. Because of its simple direct drive design, in general terms, the RIO has a very low maintenance requirement.

However, it is important to provide effective preventative maintenance to ensure a long life from the circulator. It is recommended that an inspection of the primary seal and bearings is performed annually, with inspection of the secondary seal and bearings performed every two years. It is recommended that the maintenance schedule provided be followed to ensure effective management of your asset.

Annual (Yearly) Maintenance

Yearly maintenance is required to inspect the condition of the primary seal and gearbox seating. Please refer to *Acqua & Co.* SERIE RIO 2° ed. 03/04 Diagram and associated Spare Parts List for reference as required.

- a) Remove and inspect propeller boss and blades (Part No. 17 & 18) screw (Part No. 62).
- b) Drain gear oil from primary motor casing by removing oil plug (Part No. 78).
- c) Separate reduction timing case (Part No. 40) and reduction flange (Part No. 16) and disassemble gearbox, inspecting all components for damage and/or wear. Replace or repair components as necessary.
- d) Replace bearings (Part No. 20 & 21) and reassemble gearbox components, ensuring a high-grade gear oil⁽¹⁾ is added in the zone between the reduction flange (Part No. 16) and timing case (Part No. 40). O-ring (Part No. 53) is to be replaced on reassembly.
- e) Clean motor to remove all algae, barnacles, and other build-up before returning unit to service.

- (1) High-Grade Gear Oil
900 mL of high-grade gear oil is required for motor lubrication at each service interval, BioRemedy uses and recommends:

BP Hypogear ML512
Extreme-Pressure Automotive Gear Oil
SAE 80W-90

Biennial (Two-Yearly) Maintenance

Every two years it is important to inspect the condition of primary and secondary seals and bearings and gearbox seating., and the motor bearings for wear. Please refer to *Acqua & Co. SERIE RIO 2° ed. 03/04* Diagram and associated Spare Parts List for reference as required.

- a) Perform the Annual (Yearly) Maintenance steps a) to c) as instructed.
- b) Drain paraffin oil from secondary motor casing by removing oil plug (Part No. 78) located on the rear motor flange (Part No. 27).
- c) Separate reduction flange (Part No. 16) and rear motor flange (Part No. 27) inspect rotor (Part No. 1) and stator (Part No. A). Replace or repair components as necessary.
- d) Replace bearings (Part No. 22 & 25) and reassemble motor housing, replacing the O-rings (Part No. 53) and ensuring a medicinal-grade paraffin oil⁽²⁾ is added in the zone between the reduction flange (Part No. 16) and the rear motor flange (Part No. 27).
- e) Perform the Annual (Yearly) Maintenance steps d) to e) as instructed.

- (2) Medicinal-Grade Paraffin Oil
1200 mL of medicinal-grade paraffin oil is required for motor lubrication at each service interval, BioRemedy uses and recommends:
BP Enerpar M002
Medicinal White Oil
(ISO Viscosity Grade 15).

