

MAC 5000 Searle Generator Assembly Instructions

This document provides step-by-step assembly instructions for the MAC 5000 Searle Generator.

Follow each section carefully to ensure proper integration of mechanical and electrical components.

1. Chassis & Enclosure Assembly

- Secure the base frame using reinforced steel or aluminum.
- Mount the generator housing, ensuring proper ventilation.
- Install vibration dampers to reduce mechanical stress.

2. Installing the Magnetic Rings & Rollers

- Align and position the rotating magnetic rings inside the generator.
- Attach the rollers with precision to ensure smooth rotation.
- Secure all components with non-magnetic spacers to maintain field stability.

3. Electrical System Integration

- Mount the lithium battery (LiFePO₄, 12V) inside the housing.
- Connect the charge controller to regulate energy flow.
- Wire the 120V, 240V AC outlets and 12V DC output as per the wiring diagram.

4. Starter System & Manual Charge Handle

- Install the starter motor and solenoid in proximity to the flywheel.
- Attach the manual charge handle for emergency startup.
- Ensure smooth engagement between the spindle and rotor mechanism.

5. Wiring & Safety Features

- Connect the main power lines using appropriate gauge wiring.
- Install circuit breakers for overload protection.
- Secure all wiring with insulated clamps and ensure proper grounding.

6. Final Testing & Calibration

- Power on the generator and monitor voltage readings.
- Verify the functionality of all outputs (120V, 240V AC, 12V DC).

- Conduct a stress test under load conditions to confirm performance.