WS5100 AGRICULTURAL UAS

Technician Diagnostics Checklist

Derived from the WS5100 UAS Maintenance Manual — use as a pre-service and diagnostic pass ahead of full servicing.

Technician: _____

Date: _____

⚠ **SAFETY FIRST:** Power off the UAS and disconnect the battery before beginning. Never adjust internal wiring while powered.

1. Airframe

- ☐ All screws properly tightened
- ☐ No visible breaks or damage that could affect flight safety
- ☐ Arm tubes free of damage
- ☐ Landing gear intact and undamaged
- ☐ Left and right landing gear rest at the same tilt angle
- ☐ No obstructions (e.g. conductive tape) around antennas

2. Battery

- ☐ No swelling, leakage, or deformity — if found, stop use immediately and do not charge
- ☐ Connectors clean of residue (clean with eraser if needed)
- ☐ Connectors free of erosion, corrosion, or bent connector body
- ☐ Battery voltage within normal range

  Note: A damaged or swollen battery must be discharged to ≤10% and disposed of — never dismantled.

3. Motors

- ☐ Rotors securely fastened and correctly positioned
- ☐ Remove propellers and run motors to check for unusual noise or excessive vibration
- ☐ Motor base screws tightened; surrounding plastics undamaged

4. Propellers

- ☐ No bending, breakage, or cracking on any blade

5. Flight Controller

- ☐ IMU status checked in the ground control app; advanced calibration run if needed
- ☐ Compass and GPS calibrated for accurate navigation

6. Transmitter & Receiver

☐ Landing-gear antennas stable, no bending or damage

☐ Remote-controller antennas undamaged

☐ Antennas securely fastened

☐ UAS and remote bind and connect

7. Spraying System

☐ System clean and free from obstructions or blockages

☐ Spray nozzles inspected for wear

☐ Pneumatic tubing checked for bends or leaks

10. Sign-Off

☐ All findings and any repairs/replacements noted.

Result (Pass / Needs Repair): _____

Comments: _____

_____

_____

Technician Signature: _____

Reference: WS5100 UAS Maintenance Manual (Studica Robotics & UAS). For full troubleshooting charts and part-specific likelihood ratings, consult Sections 10–12 of the manual.