

DRONE MAINTENANCE

The following maintenance is recommended to be performed monthly or after 20 battery charge cycles or 20 hours of aircraft flight time. These items are in addition to the inspections of all equipment prior to each flight.

Battery Maintenance

Battery Deep Cycle Discharge

When you deep cycle the battery, it also re-initializes the battery's internal software. Always allow a LiPo battery to cool completely before any recharge to help protect your battery and extend its life.

Slower Deep Cycle Method:

1. Fly until battery level reaches 25%-30%
2. Allow battery to cool completely to room temperature
3. Put battery back in and turn on aircraft (optionally starting motors with no propellers) and allow battery to discharge until it gets down to 8%, or until the battery can no longer be turned on. Launch the DJI GO app to check battery levels.

Important: NEVER fully discharge the battery to 0% - it can cause permanent damage

Tip: With engines stopped, the battery seems to drain about 1% every 5 minutes or so

4. Allow the battery to cool completely again to room temperature
5. Recharge battery normally

Rapid Deep Cycle Method:

1. Fly the aircraft outdoors until there is less than 8% of power left, or until the battery can no longer be turned on.
2. Allow the battery to cool completely again to room temperature
3. Recharge battery normally

Battery Inspection

Carefully inspect the battery:

Exterior inspection:

1. Check if there is damage or any deformities, such as swelling of the outer shell
2. Look for any cracks in the plastic enclosure
3. Verify that the battery grip is firm and that the latches (plastic clips that you push to get the battery out of the aircraft) work properly and return to position after pushed

Contacts inspection and cleanup:

1. Check all gold plates on the battery. If there are any stains on the surface, you can use a Q-tip dipped in pure (anhydrous) isopropyl alcohol (alcohol containing no more than 1% water) or electrical contact cleaner (typically comes in a spray can) to clean them to ensure good contact.
2. Check to see if the metal contacts of the battery power and data sockets are damaged. If the surface is severely burnt, use a piece of a fine sandpaper (Grit 150 or higher) to carefully clean the surface.

Aircraft Maintenance

Perform a thorough inspection of the aircraft:

Aircraft and Exterior Shell inspection:

1. Look for cracks in the outer shell, specifically around the motors which are more prone to cracks.
2. Check that all screws are in place and make sure there are no loose screws. Use a flashlight and a small screwdriver to help with this.
3. Inspect all the stickers on the aircraft and make sure there are no loose stickers. Loose stickers may fall midflight and obstruct the motors.
4. Verify that the aircraft registration label shows up properly on the exterior of the aircraft.
5. Inspect the propellers and look for broken pieces, bent or nicked blades, threads and mounting tabs intact, or other damage.
6. With propellers on, rotate each propeller with your finger and make sure all move freely.
7. Remove propellers, turn on aircraft and start the motors. Check if motors are rotating without unusual vibration and that the motor shafts rotate straight without any wobble.
8. Physically clean all exterior surfaces.

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Sensors and Vents:

1. Verify all vents are clean and open.
2. Verify that the Sonar sensors and Proximity sensors (if equipped) are clean.

Gimbal/Camera:

1. Check gimbal vibration absorbers - make sure they are not cracked or stiff and that they are inside their housing.
2. Check the gimbal pins that are securing the vibration absorbers - make sure at least 2 are installed (if equipped).
3. Inspect camera lens for damage.
4. Inspect gimbal arm and wires for damage.
5. Clean the camera lens and all lens filters.

Battery Contacts:

1. Remove the battery from the aircraft.
2. Check all gold battery plates inside the aircraft. If there are any stains on the surface, you can use a Q-tip dipped in pure (anhydrous) isopropyl alcohol (alcohol containing no more than 1% water) or electrical contact cleaner (typically comes in a spray can) to clean them to ensure good contact.
3. Check to see if the metal contacts of the battery power and data sockets are damaged. If the surface severely burnt, use a piece of a fine sandpaper (Grit 150 or higher) to carefully clean the surface.
4. Check interior of battery compartment for any signs of corrosion or leakage.

Sensor Calibration

Calibrate all sensors:

1. Perform IMU calibration. IMU calibration works best on a completely flat surface. After you've connected the remote controller with the mobile device, go to Settings – Sensors – Check IMU – IMU Calibration.
Tip: Perform this calibration when the aircraft has cooled down to room temperature. This will assist later with the startup time of the aircraft.
2. Perform Compass calibration.
3. Perform Gimbal calibration.
4. Perform Vision Sensor Calibration.

Remote Control:

1. Inspect remote control for signs of damage or excessive wear.
2. Inspect antennas and mounts for signs a wear or damage.
3. Reset all remote control and aircraft setting to default values.
4. Cycle and verify all controls operate smoothly through their full range of operation.
5. Perform a Remote Control calibration.
6. Pair the remote with the aircraft to refresh the connection information.

Memory Cards:

1. Copy all desired pictures and videos off the video cards
2. Install each card in the aircraft and format the card using the routines built into the aircraft/remote.

Firmware/Software Updates:

1. Turn on the aircraft and remote and check for software and firmware updates, install any available.
2. Install each battery, turn on the aircraft, and check for firmware updates and install. Repeat for each and every battery.
3. Check for tablet/phone operating system updates and install
4. Check for tablet/phone aircraft software updates and install.
5. After all updates are installed restart (cold start) the tablet/phone, remote, and aircraft and test fly to check for proper operation and aircraft control.