

CGT50 Pre Flight Checklist



CGT50 PRE FLIGHT CHECKLIST

VERSION: V 18.0

EFFECTIVE DATE: 3 April 2023

Read & Do

☐ = If Applicable

	1. DETAILS		
1	Tail Number:		
2	Flight Location:		
3	Date:		
4	Time:		
5	Pre Flight Checklist Completed By: <i>Technician Name</i>		

2. FLIGHTLINE FOD CHECKS (TAKEOFF & LANDING AREAS)

1	Nearby Perimeter Fences	Clean	☐
2	Outside Rubbish Bins	Covered, Not Overflowing	☐
3	Construction Zones	Clean or Protected by Fencing	☐
4	Loose Objects in the Flight Vicinity	None	☐
5	Access Areas to the Aircraft	Free of Rubbish	☐
6	Hardware or Other Debris on Ramp Surface	None	☐
7	Taxiway Shoulders	Free of Loose Stones & Grass Cuttings	☐
8	Infields	Free of Rubbish	☐
9	Objects that may be Dangerously Close to the Launching Aircraft	None	☐
10	Maintenance Personnel	Neat, FOD Free, Nothing can Come Loose	☐
11	Bird & Wildlife Attractants Nearby	Check	☐
12	Large Birds Visible from the Airfield	Check	☐
13	FOD Containers Accessible to Work Areas	Confirm	☐
14	TakeOff Area	Clear of Any Debris	☐
15	Landing & Alternate Landing Areas	Clear of Any Debris	☐

3. GENERAL			
1	Personal Protective Equipment (PPE) <i>UAS Team</i>	Checked	☐
2	Minimum Technical Equipment <i>Required for all Operating Procedures</i>	Available	☐
3	Safety Equipment <i>Required for all Operating Procedures</i>	Available , Checked	☐
4	Move Aircraft from Assembly Area to TakeOff Area	Min 2 People	☐
5	TakeOff Table	Assembled , Secure	☐
6	TakeOff Table ☐ <i>Consider Engine Start & RunUp , 2 Crew Operations</i>	Secured to Ground	☐
7	Aircraft Positioned on TakeOff Table	Check Table Markings	☐
8	Aircraft & Table	Orientated Into Wind	☐
9	GCS Ignition ☐	Off	☐
10	Aircraft Ignition	Off	☐
11	LH Pitot Tube	Undamaged	☐
12	LH Static Port	Undamaged	☐
13	RH Pitot Tube	Undamaged	☐
14	RH Static Port	Undamaged	☐
15	All Covers <i>Pitot , Propeller , Exhaust</i>	Installed	☐
16	Undercarriage & Tail Rest	Undamaged , Secure	☐
17	Fuselage <i>Lower , LHS , Upper , RHS</i>	Undamaged	☐
18	All Antennas	Secured , Undamaged	☐
19	XT60 Regulator Connection	Connected	☐
20	Shore Power <i>Adjust to 14.5 V</i>	Connect	☐
21	Service Covers & Screws <i>0.3 Nm Torque</i>	Installed , Secure	☐

4. LH (PORT) WING			
1	Wing <i>Leading Edge , Upper , Trailing Edge , Lower</i>	Undamaged	☐
2	Ailerons (Both) <i>Upper , Trailing Edge , Lower</i>	Undamaged	☐
3	Wing Tip LED	Undamaged	☐
4	Servos	Undamaged	☐
5	Servo Covers <i>Covers 0.3 Nm Torque</i>	Secure	☐
6	Servo Push Rods	Undamaged , Not Bent	☐
7	Servo Arms	Undamaged	☐
8	Servo Arms	No Play Present	☐
9	Control Surface Horns	Undamaged , Secure	☐
10	Pushrod Clips	In Place , Secured	☐
11	Control Surfaces & Hinges	Operate Smoothly No Wear or Damage	☐

5. LH (PORT) VTOL SYSTEM

1	VTOL Boom <i>Longer Section to the Front</i> <i>Fasteners 5 Nm Torque</i>	Attached , Secure	☐
2	VTOL Motor Assemblies (Both)	Secure & No Loose or Missing Screws	☐
3	VTOL Motor Housing & Windings (Both) <i>Dry Air Only to be Used if Blown Clean</i>	Clean No Dirt, Debris, FOD	☐
4	VTOL Motor Cable Sheaths (Both)	Undamaged , Unfrayed No Cuts or Pinches	☐
5	VTOL ESC Cables	Undamaged , Unfrayed No Cuts or Pinches	☐
6	Vtol ESC Mount Plate	Bonded , Undamaged	☐
7	Propeller Blades <i>Both Motor Assemblies</i>	Undamaged , Secure	☐
8	Propellers FWD Motor	Labelled L or CW	☐
9	Propellers AFT Motor	Labelled R or CCW	☐
10	Both VTOL Motors Tilted Outwards	Confirm	☐

6. VERTICAL STABILISER

1	Vertical Stabiliser <i>Leading Edge , LHS , Trailing Edge , RHS</i>	Undamaged	☐
2	Rudder <i>LHS , Trailing Edge , RHS</i>	Undamaged	☐
3	Servo	Undamaged	☐
4	Servo Cover <i>Covers 0.3 Nm Torque</i>	Secure	☐
5	Servo Push Rod	Undamaged , Not Bent	☐
6	Servo Arm	Undamaged	☐
7	Servo Arm	No Play Present	☐
8	Control Surface Horn	Undamaged , Secure	☐
9	Pushrod Clips	In Place , Secured	☐
10	Control Surfaces & Hinges	Operate Smoothly No Wear or Damage	☐

7. HORIZONTAL STABILISER

1	Horizontal Stabiliser <i>Leading Edge , Upper , Trailing Edge , Lower</i>	Undamaged	☐
2	LH Elevator <i>Upper , Trailing Edge , Lower</i>	Undamaged	☐
3	RH Elevator <i>Upper , Trailing Edge , Lower</i>	Undamaged	☐
4	Servos	Undamaged	☐
5	Servo Covers <i>Covers 0.3 Nm Torque</i>	Secure	☐
6	Servo Push Rods	Undamaged , Not Bent	☐
7	Servo Arms	Undamaged	☐
8	Servo Arms	No Play Present	☐
9	Control Surface Horns	Undamaged , Secure	☐
10	Pushrod Clips	In Place , Secured	☐
11	Control Surfaces & Hinges	Operate Smoothly No Wear or Damage	☐

8. PILOT CAMERA

1	Support & Cover	Undamaged , Secure	☐
2	Camera	Aligned Correctly	☐
3	Camera Lens	Undamaged	☐
4	Camera Lens	Clean	☐
5	Camera Lens	No Fog , Moisture or Residue	☐

9. RH (STARBOARD) WING

1	Wing <i>Leading Edge , Upper , Trailing Edge , Lower</i>	Undamaged	☐
2	Ailerons (Both) <i>Upper , Trailing Edge , Lower</i>	Undamaged	☐
3	Wing Tip LED	Undamaged	☐
4	Servos	Undamaged	☐
5	Servo Covers <i>Covers 0.3 Nm Torque</i>	Secure	☐
6	Servo Push Rods	Undamaged , Not Bent	☐
7	Servo Arms	Undamaged	☐
8	Servo Arms	No Play Present	☐
9	Control Surface Horns	Undamaged , Secure	☐
10	Pushrod Clips	In Place , Secured	☐
11	Control Surfaces & Hinges	Operate Smoothly No Wear or Damage	☐

10. RH (STARBOARD) VTOL SYSTEM			
1	VTOL Boom <i>Longer Section to the Front</i> <i>Fasteners 5 Nm Torque</i>	Attached , Secure	☐
2	VTOL Motor Assemblies (Both)	Secure & No Loose or Missing Screws	☐
3	VTOL Motor Housing & Windings (Both) <i>Dry Air Only to be Used if Blown Clean</i>	Clean No Dirt, Debris, FOD	☐
4	VTOL Motor Cable Sheaths (Both)	Undamaged , Unfrayed No Cuts or Pinches	☐
5	VTOL ESC Cables	Undamaged , Unfrayed No Cuts or Pinches	☐
6	Vtol ESC Mount Plate	Bonded , Undamaged	☐
7	Propeller Blades <i>Both Motor Assemblies</i>	Undamaged, Secure	☐
8	Propellers FWD Motor	Labelled R or CCW	☐
9	Propellers AFT Motor	Labelled L or CW	☐
10	Both VTOL Motors Tilted Outwards	Confirm	☐

11. MAIN ENGINE			
1	GCS Ignition ☐	Off	☐
2	Aircraft Ignition	Off	☐
3	Cowling ☐	Undamaged , Secure	☐
4	Engine <i>May be Hot</i>	Undamaged	☐
5	Exhaust (Mufflers)	Undamaged Debris Free	☐
6	All Torque Seals	Aligned	☐
7	Propeller & Blade	Secure , Undamaged	☐
8	Propeller	Rotates by Hand	☐
9	Propeller Stall Position <i>Flick X 7 from TDC</i>	Horizontal	☐
10	Propeller Attachment Bolts Torque Seals <i>Remove Spinner to Check</i> <i>Bolts 9.5 Nm Torque</i>	Aligned	☐
11	Spinner	Aligned , Undamaged	☐
12	Spinner Connection Screw	Tight , No Play	☐
13	Standoff , Vibration Mounts	Undamaged , Not Hard No Cracks	☐
14	All Torque Seals	Aligned	☐
15	Fuel Hose	Undamaged No Leaks	☐
16	Spark Plugs & Cables	Undamaged Not Loose Properly Seated	☐
17	Hall Sensor & Wire Harness <i>Check Sensor Position has Not Shifted from Reference Mark</i>	Undamaged	☐
18	Temperature Sensor	Undamaged In Place , Secure	☐

12. AIRCRAFT CENTRE OF GRAVITY (CG)

1	VTOL Batteries	OnBoard <i>Disconnected</i>	☐
2	Ballast Required <i>CG Adjusted by Adding or Removing Ballast at Designated Locations</i>	Added or Removed	☐
3	Payload ☐	OnBoard	☐
4	All Protection Covers <i>Pitot , Propeller , Exhaust</i>	Removed	☐
5	All Service Panels & Covers	In Place	☐
6	Centre of Gravity <i>Appropriate Method Should be Used</i> <i>Fuelling Does Not Change CG Location</i>	Tested & True	☐

13. AIRCRAFT ZERO FUEL WEIGHT

1	VTOL Batteries	OnBoard <i>Disconnected</i>	☐
2	Payload ☐	OnBoard	☐
3	All Protection Covers <i>Pitot , Propeller , Exhaust</i>	Removed	☐
4	All Service Panels & Covers	In Place	☐
5	Record Aircraft Zero Fuel Weight		kg

14. FUELLING

1	Fire Extinguisher at Fuelling Area	Present & Reachable	☐
2	Fuelling Adapter	Connect	☐
3	Fuelling Procedure	Complete	☐
4	Fuel Tank <i>Wait a Few Minutes and Check the Outside of the Fuel Tank</i>	No Leaks	☐
5	Record Total Fuel		kg

15. AIRCRAFT TAKEOFF WEIGHT

1	VTOL Batteries	OnBoard <i>Disconnected</i>	☐
2	Payload ☐	OnBoard	☐
3	Fuelling	Completed	☐
4	All Protection Covers <i>Pitot , Propeller , Exhaust</i>	Removed	☐
5	All Service Panels & Covers	In Place	☐
6	Record Aircraft TakeOff Weight <i>Aircraft Total Weight KDE VTOL ≤ 55 kg</i> <i>Prototype I Motor VTOL ≤ 60 kg</i>		kg
7	Pitot Covers	Install	☐

16. VTOL BATTERIES			
1	Record VTOL Battery 1 - LH Wing <i>% Capacity & Serial Number</i>		% #
2	Record VTOL Battery 2 - LH Wing <i>% Capacity & Serial Number</i>		% #
3	Record VTOL Battery 1 - RH Wing <i>% Capacity & Serial Number</i>		% #
4	Record VTOL Battery 2 - RH Wing <i>% Capacity & Serial Number</i>		% #
5	All Cells of All VTOL Batteries	≥ 97% Capacity	☐

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