



# Canadian Association of Rocketry

## Rocket Inspector (RI) Pre-Flight Inspection Checklist

### Propulsion

- Is the thrust to weight ratio high enough to assure safe flight? .....
- Is the thrust transfer ring or equivalent adequate to transfer motor thrust to airframe? .....
- Are all motors firmly retained to the vehicle? .....
- Is appropriate ignition source present for multi-stage or cluster? (i.e., low current, wired in parallel) ..
- If used, is motor deployment appropriate? .....
- If multiple stage, is system fail-safe in event of catastrophic failure during boost? .....
- If hybrid, is motor vent isolated from the deployment system, and visible from the LCO table? .....
- If hybrid, is the LCO familiar with the required launch procedure? .....

### Flight Estimation

- Has the maximum altitude been calculated using appropriate means? .....
- Has the maximum acceleration and velocity been calculated using appropriate means? .....
- Does the model have an adequate stability margin? (CG/CP relationship appropriate for the design) ..
- If multiple stages present, was stability margin calculated and shown for all stage configurations? .....
- Was the CP calculated using an appropriate method? (e.g., RockSim) .....

### Airframe

- Is the overall airframe structure adequate to withstand the anticipated flight forces? .....
- Are the fins secured to the airframe with adequate reinforcement? .....
- Are adequate launch guides present? (i.e., rail buttons, or tower) .....

### Recovery System

- Is the shock cord adequate to handle the forces of high speed deployment? .....
- Are the shock cord attachment points sufficient to handle the forces of high speed deployment? .....
- Is the parachute or streamer structurally sound, and adequately sized for safe recovery? .....
- Is adequate protection present to protect parachutes or streamers from ejection charges? .....
- Are deployment charges adequately sized, installed, sealed, and ground tested when appropriate? ....
- Are nosecone and payload sections sufficiently snug to prevent drag separation? .....
- (If shear pins installed previously, obtain Roaming RI check of above. Signature: \_\_\_\_\_)
- Is a vent-hole present to prevent in-flight separation at altitude? .....
- Is a redundant deployment system present if loaded vehicle mass is over 5 kg? .....

### Electronics

- Are all ejections charges safed? (i.e., shunted) .....
- Are all components adequately secured against acceleration forces? (i.e., batteries, connectors) .....
- Is the electronic circuit armed safely? (e.g., remote switches/indicators present to protect the user) ..
- If RF active control is used, is the operating frequency in the 27, 50, 53, or 72 MHz bands? .....
- If RF active control is used, has the system been ground tested? .....
- Does the flyer have a checklist or equivalent to arm the system prior to flight? .....

RI Name (Print):

RI Signature:

Date: