

# ELECTRIC VEHICLE C



Checklist – 2017

Team Number: C \_\_\_ Team Name: \_\_\_\_\_

Rank: \_\_\_\_\_

Student Names: \_\_\_\_\_

Final Score: \_\_\_\_\_

5.b. The vehicle, batteries, and spare parts are impounded before the start of the competition. 1. Y N

## Construction Parameters

2.b. All electrical energy used within the vehicle for any purpose is stored in common, commercially available batteries labeled with their voltage by the manufacturer. Lead acid batteries are not used. Y N

2.c. Voltage across any two points are  $\leq 9$  V as stated by the manufacturer labels. Y N

2.d. All energy for propulsion is electric and comes from the batteries. All sources of energy are easily accessible location for inspection by the ES. Y N

2.g. A single approximately  $\frac{1}{4}$ " dowel is attached to the front end of the vehicle and is approximately perpendicular to the floor and is the leading part of the vehicle at all times. The dowel extends  $\geq 20.0$  cm from the floor to trigger the photogate system. The bottom of the dowel is  $\leq 1.0$  cm from the track's surface. Y N

### HOW MANY "NO'S" ARE CIRCLED IN THIS SECTION?

2. \_\_\_\_\_

#### Individual Runs

Run 1		Run 2	
Y	N	Y	N

2.f. The wheels and treads in the ready-to-run configuration fit in a 30.0 cm x 60.0 cm space of any height. Y N Y N

2.h. Competitors start the vehicle by using any part of an unsharpened #2 pencil with an unused eraser to actuate a button or switch by pushing it perpendicular to the floor. Y N Y N

2.i. Any sighting/aiming devices placed on the track are removed before each run. Y N Y N

2.j. The only parts of the vehicle to contact the floor during the run are the wheels/treads and parts in contact with the floor in the ready-to-run position. Pieces do not fall from the vehicle. Y N Y N

2.k. The vehicle is not remotely controlled or tethered. The stopping mechanism works automatically. Y N Y N

### HOW MANY "NO'S" ARE CIRCLED FOR EACH RUN IN THIS SECTION?

3. \_\_\_\_\_ 12. \_\_\_\_\_

#### The Competition

5.c. Competitors do not leave the area or receive outside assistance, materials, or communication once they enter the event area. Competitors do not use AC outlet power during their 8 minutes. Y N Y N

5.e. In the ready-to-run configuration, the vehicle's Measurement Point is over the Start Point. The vehicle remains in the ready-to-run configuration without being touched. Y N Y N

5.g. Team does not roll the vehicle on the floor of the event track the day of the event. Y N Y N

5.h. Substances applied to the vehicle do not damage the floor or leave residue on the track and/or event area and are approved by the ES prior to use. The track remains dry at all times. Y N Y N

5.j. The vehicle is not propelled backwards at any time during the run. Y N Y N

5.l. Once the vehicle starts a run, the competitors do not follow it and wait until called by the ES. Y N Y N

5.n. The vehicle passes the 8.50 m Line. Y N Y N

### HOW MANY "NO'S" ARE CIRCLED FOR EACH RUN IN THIS SECTION?

4. \_\_\_\_\_ 13. \_\_\_\_\_

#### Run Parameters

3.c. Bonus: Inner distance between the two cans along the Bonus Line in cm to the nearest 0.1 cm. 5. \_\_\_\_\_ 14. \_\_\_\_\_

6.d. Bonus: Bonus attempted and all parts of the vehicle travelled between the two cans. 6. Y N 15. Y N

6.c. Distance (point to point) from the Measurement Pt. to Target Pt. in cm (to the nearest 0.1 cm) 7. \_\_\_\_\_ 16. \_\_\_\_\_

5.k. Run Time: Starts when the dowel of the vehicle reaches 0.50 m, ends when it passes the 8.50 m line (or when it stops if it doesn't pass the 8.50 m line), measured in seconds to the precision of the timing device

	Timer 1	Timer 2	Timer 3
8. _____	17. _____	9. _____	18. _____
10. _____	19. _____		

5.p. Failed Run (the time and/or distance cannot be measured for the vehicle: it starts before the ES is ready, it moves but does not go at least 0.50 m, competitors pick it up before it is measured, and/or the run cannot be started in the 8 min) 11. Y N 20. Y N

6.e. Penalty: Practice logs are incomplete. 21. Y N

6.e. Penalty: No practice logs impounded. 22. Y N

General Rule. Disqualified (notify the team and their coach as soon as possible) 23. Y N