

# 2010 Wisconsin Electrathon Inspection Form

Date: \_\_\_\_\_ Car Number: \_\_\_\_\_ Class: 1 2 3 E (Circle one)

Team: \_\_\_\_\_

## Check-in (Coordinator will complete this section)

- a. \_\_\_\_\_ Journal/Final Report
- b. \_\_\_\_\_ 16 years of age and drivers license or learners permit for all drivers (p. 8, Driver #1)
- c. \_\_\_\_\_ Helmet certification form signed by instructor (p. 9, Safety #1)
- d. \_\_\_\_\_ Alternative frame material documentation - Class 2 and 3 only (p. 3, Chassis/Frame #3)
- e. \_\_\_\_\_ Battery Information documented on Instructor Certification Sheet
- f. \_\_\_\_\_ Solar panel/regen braking Class 3 only (p. 2)

\_\_\_\_\_  
Advisor Name

\_\_\_\_\_  
Advisor Signature

(Advisor: Please sign this form **before** your inspection. Signing this form means that you've checked all of these items on your vehicle(s) with your team and acknowledge that the driver's listed below are the only students who will be driving.)

\_\_\_\_\_  
Driver 1 Name

\_\_\_\_\_  
Driver 1 Signature

\_\_\_\_\_  
Driver 2 Name

\_\_\_\_\_  
Driver 2 Signature

\_\_\_\_\_  
Driver 3 Name

\_\_\_\_\_  
Driver 3 Signature

\_\_\_\_\_  
Driver 4 Name

\_\_\_\_\_  
Driver 4 Signature

**Note to Inspectors:** Please initial each blank to certify that it was inspected.

## 1. Driver and Ballast (for each driver)

- a. \_\_\_\_\_ Safety glasses (Z87 rated) w/side shields, goggles, or face shield on helmet (p. 8, Safety Equipment #2)
- b. \_\_\_\_\_ Long pants & sleeves, shoes, gloves (p. 8, Safety Equipment #4)
- c. \_\_\_\_\_ Driver Weight (pounds) (at least 180 lbs. or add ballast) (p. 8, Driver #3)
- d. \_\_\_\_\_ Ballast Weight (pounds) (if needed) (p. 8, Driver #4)

Inspector comments and description of ballast and location in car:

## 2. General

- a. \_\_\_\_\_ Minimum track width is 24" (p. 4, Body #1)
- b. \_\_\_\_\_ Vehicle width is 4' or less (p. 4, Body #1)
- c. \_\_\_\_\_ Vehicle length is 12' or less (p. 4, Body #1)
- d. \_\_\_\_\_ 1" (min.) structural tubing (p. 3, Chassis/Frame #1)
- e. \_\_\_\_\_ 3/4" (min.) support tubing (webbing) (p. 3, Chassis/Frame #2)
- f. \_\_\_\_\_ Rearward and forward bracing no more than 6" from top of roll bar (p. 4, Roll Cage #3)
- g. \_\_\_\_\_ Head restraint present with adequate padding (p. 4, Head Restraint #1)
- h. \_\_\_\_\_ Padding on possible contact points in cockpit area (p. 3, Chassis/Frame #4; p. 4, Roll Cage #6)
- i. \_\_\_\_\_ Structural members (min. 8" x 8") at car front to protect driver's feet & prevent intrusion into other vehicles (p. 3, Crash Protection #1)

- j. \_\_\_\_\_ Structural members around driver's compartment no more than 6" apart up to the top of the drivers shoulder (p. 3, Crash Protection #5, 6)
- k. \_\_\_\_\_ Tires are pneumatic (p. 5, Tires #1)
- l. \_\_\_\_\_ 3/8" minimum tie rod diameter attached to acceptable steering configuration (p. 5, Steering #1)
- m. \_\_\_\_\_ Axle 0.5 inch (or 12mm) minimum unless supported on both sides of wheel (p. 5, Wheels & Axles #4)
- n. \_\_\_\_\_ Wheel axle nuts secured by wire, pins or double nut (if cantilevered) (p. 5, Wheels & Axles #4)
- o. \_\_\_\_\_ Brakes on two wheels on same axle (p. 5, Brakes #1)
- p. \_\_\_\_\_ Body present on Class 2 cars (p. 2)
- q. \_\_\_\_\_ Vehicle number is highly visible and approximately 8" in height and 20" wide (p. 4, Body #4)
- r. \_\_\_\_\_ No exposed sharp edges or components on body (p. 4, Body #2)
- s. \_\_\_\_\_ Ballast is of appropriate material and securely fastened to vehicle (p. 8, Ballast #2, 4)

Inspector comments:

### 3. Electrical System and Batteries

\*Note: circuit protection/disconnect/outside kill/inside kill may all be one unit.\*

- a. \_\_\_\_\_ Auto throttle shut-off/disconnect when throttle is released (p. 7, Electrical System #5)
- b. \_\_\_\_\_ Electrical drive system isolated from the chassis (frame cannot be energized with battery voltage) (p. 7, Electrical System #6)
- c. \_\_\_\_\_ Proper circuit protection, fuse or circuit breaker placed between the battery and the motor controller (p. 6, Electrical System #1, 6)
- d. \_\_\_\_\_ Battery disconnect switch(es) are located between the battery and the motor controller (p. 6, Electrical System #2a)
- e. \_\_\_\_\_ Master disconnect switch in hi-vis triangle with an On/Off label (4 inch) (p. 6, Electrical System #2, 2a)
- f. \_\_\_\_\_ Lead Acid Batteries 73 lbs. or less (Classes 1 & 2) (p. 6, Batteries #2, 6)
- g. \_\_\_\_\_ Battery and battery boxes securely mounted (p. 6, Batteries #7)
- h. \_\_\_\_\_ Battery box completely encloses batteries and is non-conductive (p. 6, Batteries #7a)
- i. \_\_\_\_\_ Batteries inside frame cage or protected by framing members (p. 3, Crash Protection #5)

Inspector comments:

**4. Seated Driver** Driver must have helmet on and be dressed for event. Always test for tallest driver. Also test shortest driver if height difference is greater than 6 inches.

Tallest Driver    Shortest Driver

- a. \_\_\_\_\_            \_\_\_\_\_ Ground clearance exceeds tire sidewall (p. 5, Tires #2)
- b. \_\_\_\_\_            \_\_\_\_\_ Top of helmet at least 2" below top of roll cage – (Does not include foam) (p. 4, Roll Cage #1)
- c. \_\_\_\_\_            \_\_\_\_\_ Driver's face at least 2" behind the forward bracing framework (p. 4, Roll Cage #3a)
- d. \_\_\_\_\_            \_\_\_\_\_ 5 point harness fits appropriately and is securely attached (p. 7, Seat Belts #1)
- e. \_\_\_\_\_            \_\_\_\_\_ All parts of driver inside frame cage at all times (p. 4, Roll Cage #7)
- f. \_\_\_\_\_            \_\_\_\_\_ Driver protected from contact with the road surface (p. 3, Chassis/Frame #5)
- g. \_\_\_\_\_            \_\_\_\_\_ Driver and all personnel protected from moving parts (p. 7, Motor, Controller, and Drive Train #4; p. 8, Safety Equipment #5)

- h. \_\_\_\_\_ \_\_\_\_\_ Hand operated brakes allow full application without taking the driver's hands off the steering devices(s) (p. 5, Brakes #1a)
- i. \_\_\_\_\_ \_\_\_\_\_ Brakes keep car stationary if pushed (p. 5, Brakes #5)
- j. \_\_\_\_\_ \_\_\_\_\_ Brake light(s) activate automatically and have a minimum area of 4" X 2" (p. 5, Lighting #1, 2)
- k. \_\_\_\_\_ \_\_\_\_\_ Canopy, if present, is securely attached but not bolted or taped on, yet easily removable by driver or track officials (p. 5, Body #6)
- l. \_\_\_\_\_ \_\_\_\_\_ Master disconnect switch is accessible to track officials and driver at all times (p. 6, Electrical System #2)
- m. \_\_\_\_\_ \_\_\_\_\_ Field of vision w/canopy: 270 degree front, 120 degree rear with mirrors (p. 7, Mirrors & Vision #1, 2)
- n. \_\_\_\_\_ \_\_\_\_\_ Mirrors are at least 8 square inches in area and must have solid arms (p. 7, Mirrors & Vision #1)
- o. \_\_\_\_\_ \_\_\_\_\_ Exit in under 20 sec. (p. 8, Driver #5)

Inspector Comments:

**If any above items require changing before the endurance challenge, please indicate in the space below; do not sign this sheet until the changes have been made.**

**Vehicle changes that are not safety related should move on to braking and maneuverability.**

**If vehicle is ready to compete in all challenges please sign below. This car must move on to braking and maneuverability (in that order).**

**Comments:**

**Inspector's Signature** \_\_\_\_\_

**5. Track Readiness**

Driver demonstrates control of vehicle: inspector may request hot lap(s) or judge from previous driving experience or braking and maneuverability competitions.

Braking results:                      Try 1: \_\_\_\_\_                      Try 2: \_\_\_\_\_ (max 25') (p. 11)

Maneuverability results:              Try 1: \_\_\_\_\_                      Try 2: \_\_\_\_\_ (p. 11)

Braking/Maneuverability comments: