# 2016 UPDATES

**Dates**:

SPRING COMPETETION, MAY 6, 2016
FALL COMPETETION, NOVEMBER 4, 2016

**Batteries**:

We will be using the 67lb battery rule for the 2016 season! The only accepted Optima Red Top Battery is the Model 25/35 series. Using the following Red Top Batteries will result in the following reductions:

| | |
|---|---|
| Model 34-34R | 11% of laps |
| Model 34/78 | 11% |
| Model D 35 | 11% |

**Number 0f Vehicles**

Due to the popularity of our program we have decided to limit each School/team to two vehicles.

**1ST Place**

The purpose of the program is to promote electric power, research, design, and problem solving. At our annual meeting the group decided that once a vehicle attains two First Place Finishes, they will not be considered for future competition. The vehicle may continue to be used for driver/team training. This new rule will be effective with the Spring 2016 season.

**Extended Day**

For safety concerns we will be moving to three heats. A new time schedule will be posted in the registration packet.

**Inspection Ready**

When you come to the track, your vehicle should be ready for inspection. We will not hold up inspections while people work on their vehicles.

**Seat Belts**

Please follow the seat belt rule as stated in the Electrathon America Hand Book. The rule calls for a five point hitch, (not a four point hitch). The shoulder harness should be mounted at least 3" below the shoulders, waist strap, 3" below the waist, and the crotch strap under the driver's crotch. The shoulder harness belts should be in the middle of the shoulder, not on the outside of the shoulder.

**Lap Counting**

With the increase in the number of vehicles, lap counting has become a concern. The addition of a third heat and extra lap counters, the problem should be rectified in the short term. We are in the process of investigating an electronic system. While the transponders are inexpensive, the system is costly.

# 2016 UPDATES

**Driver Change**

Only one person may assist during the driver change.

**Pit crew**

Only two team members will be allowed to assist with vehicle malfunctions.

**REMINDER**

**Roll Bar**

Roll bar height will be measured from the top of the roll bar to a front structural member. All welded joints are to be triangulated.

**Registration**

Registration becomes difficult and time consuming when teams fail to send in the required information listed in the packet. Team packets that are complete will be registered first! When registration goes smoothly Inspections go quickly.

# CT ELECTRATHON CHALLENGE

LIME ROCK PARK

You are cordially invited to attend the **Fifteenth Fall** energy efficiency Electrathon Event in Connecticut. Come and view the streamlined designs and engineering ideas that students have incorporated into these one-of-a-kind vehicles

When: **Nov 4, 2016** (Rain Date: ???)
8:00 a.m. -???
Where: Lime Rock Park, Lakeville, CT.

**::Major Sponsors::**

**-Lime Rock Park-**

**-The Wicks Group PLLC-**

**-Televersemedia-**

**-Central Connecticut State University-**

***Please Note Address Change! (Pages 3 & 16)**

## *What to Expect when arriving at Lime Rock Park*

1. **Sign-in all students at the main gate and turn in the liability release forms.**

2. **When turning off main road to the Autocross Course, stop and pick-up a parking map.**

3. **Find a spot behind the yellow tape for your team. When you have unloaded and organized, proceed to the registration table. Teams that submit a complete registration package will be registered first.**

4. **When proceeding to the table, please bring the following items:**

    - **Electrathon Membership Card**
    - **2 drivers per vehicle, and an advisor.**
    - **Ballast for each driver**
    - **Competition Batteries**
    - **Arm Bands – free for new teams, returning teams please bring last years armband.**
    - **Any other forms not previously mailed in.**

5. **The CCSU Inspection team will check ballast, administer expanded driver's test*, weigh-in driver, place batteries in holding area, and inspect your vehicle. Once inspected, they will place a sticker on your vehicle, and your team will be allowed to use the track for time trials.**

* Reminder to all new and returning teams! CCSU will administer a drivers test on the flag system and driving tools. Each driver must pass the test receiving a minimum of six (6) correct answers out of seven (7).

# Registration Form

In an effort to defray the cost of insurance and materials needed to host such an event, it was decided that an entry fee be instituted.

For the 2016 season, the Entry fee will be $75.00 per vehicle.

Registration and check is to be received no later than **Oct 14, 2016**
Late registration will incur an additional cost of **$35.00 per vehicle**.

Please make checks payable to: **CT Electrathon Challenge**. Send the form below and your check to:

**Mike Grella**
**76 Chestnut Hill**
**Litchfield, CT 06759**

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Name of School: _____ Advisor: _____

Number of Electrathon Vehicles: _____

*Please place each participating vehicle number in the proper block below.

**CLASS**

| *Novice* | *Classic(Metal+ Kits)* | *Composite* | *Solar* |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

Total amount of Money Enclosed: $_____

Enclosed in the registration Packet is a **Vehicle Inspection Form(PAGE)**. By having this Information in advance, you are giving yourself an advantage of making sure everything will go smoothly, allowing the vehicle inspection process to go more quickly and addressing any potential problems in advance. **The inspection form does not need to be returned**.

# Agenda
**Subject to Change**

| | |
|---|---|
| 8:15 am - 10:00 am | Registration |
| 8:15 am - 10:00 am | Inspections |
| 10:00 am – 10:30 am | Track Time |
| 10:45 am – 11:45 am | 1st Heat |
| 11:45 am – 12:30 pm | Lunch / Track Time |
| 12:45 pm – 1:45 pm | 2nd Heat |
| 2:00 pm – 3:00 pm | 3rd Heat |
| 3:30 pm | Awards |

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Liability release forms are needed for each student under the age of eighteen. Students should complete both sides of the form and bring them to Lime Rock on event day. Please send Mike Grella the exact number of forms needed and mailing address, at least four weeks before the competition.

*Forms cannot be duplicated!

Number of Forms___

Name_____

Street_____

Town_____

Zipcode_____

# Rules and Regulations

- **Students are not to leave the track area until lunchtime.**
- **Students and staff are not permitted on the ends of the course or the far side of the track. All students, staff and advisors are to stay behind the yellow tape.**
- Each team must have at least one adult responsible for each 10 students.
- **The inspection team will not tolerate any type of harassment from the team or its leaders**. If this happens you will be asked to leave. Inspectors will make ever effort to see that your team participates. Safety is their first priority if something is not to regulation, remember that they did not construct the vehicle.
- Each team is required to have at least 1 volunteer (if needed) to assist the race officials.
- Teams are required to **pick up after themselves**. Waste receptacles will be placed near the track.
- All the persons associated with an Electrathon event are expected to conduct themselves in a cordial manner. Confrontations or arguments will not be tolerated and participants are subject to disqualification.
- Once a decision has been rendered concerning a specific issue and your team disagrees, follow the grievance procedure. Don't go to another official and try to reverse the decision.
- Should your team vehicle experience trouble on the track, the driver is to pull off the track to a designated work area. **No competition car will be allowed back to the team area.**
- **The pit crew is not to cross the track!!** The pit crew**(Maximum 3 members)** may walk along the outside grass section, under the yellow flag, to make repairs. Should the vehicle experience trouble on the inside of the track the pit crew must wait for the yellow flag and for the race steward to allow them to cross the track. The pit crew is to have a maximum of three people.

I have read the rules and regulations to my team and agree to abide by all of the above.

Signature of advisor: _____

**Please return this to the registration desk at the time of registration**

**Lime Rock Park has been generous and has allowed CT Electrathon the use of their facility; we respect and honor their rules.**

# House Keeping

- All teams participating in the spring competition must be registered with Electrathon America and hold a valid membership card. This card must be presented for each vehicle at the time of registration.

- Once your team enters the race area, NO STUDENTS will be allowed to leave until lunchtime.

- You must have at least one adult responsible for 10 students.

- Should you have a dispute with officials, check the grievance procedure.

- Once you have your vehicle inspected, the time trial will be open to test your vehicle.

- There is no electricity available at the track. Bring extra batteries.

- We anticipate teams from other states to participate. We can learn a lot by making these teams feel welcome.

# Updates

## ::Limiting the Number of Vehicles::

The Electrathon program is gaining in my popularity and we are forced to limit the number of vehicles each participating school may enter, therefore each school may enter a MAXIMUM of THREE VEHICLES. We must operate within the time allotted us on the track.

## ::Selection of Vehicle Positions::

All cars must be pre-registered and are to be at the track ready to compete for the first heat. Selection of cars' positions in each heat will be completed by a lottery at 9a.m. Cars from different classes will run in the same heat with each car having a class designation placed on the car. A maximum of two vehicles from any school will compete in the same heat.

## ::Classes::

**NOVICE CLASS**-This class will be opened to first time or new teams that have just completed their first vehicle. They will remain in this class for the full season, but should they complete more than 100 laps in the spring competition they will be moved into the Classic Class.
**CLASSIC CLASS**-This class is designed for teams that have prior experience in Electrathon Competition. The vehicle is limited to hand built metal cars and kit cars.
**COMPOSITE CLASS**-Cars that are constructed entirely of Composite material (no frame) will compete in this class. Should the composite vehicle be your first attempt at the Electrathon series your team will participate in this class.

## TROPHIES WILL ONLY BE GIVEN IN CLASSES WITH SIX OR MORE VEHICLES!!!

## ::Best in Show::

The Best in Show award will only be given at the SPRING event. This award is open to new vehicles, from any High school, in any state, so long as they meet judging criteria. Again, your representative CANNOT VOTE FOR YOUR OWN SCHOOL'S VEHICLE. Part of the award includes the 50 copies of the Information Fact Sheet as well as the voting Ballot. The fact sheet is attached, please feel free to use our template, or create your own with similar information.

## ::Driver Exit Time::

When changing drivers during the competition, the first driver must pull into the pit area,exit the vehicle with ALL THE BALLAST and get weighed. The second driveris to secure THEIR Ballast and enter the vehicle. Should the two drivers be the same weight, the first driver must remove the entire ballast, get weighed while the second driver installs THEIR NEW BALLAST

NOTE Each driver is to their own ballast. Should a team have only one driver, they must remove ballast, get weighed, reinstall ballast before entering the vehicle.
The team vehicle will be penalized one lap.

## ::Batteries::

We will remain with the 67lb rule for the 2012 season. Any commercially produced agm/gel cell battery combination will be acceptable up to 67 lbs.
NO HEATING OR CHARGING of batteries will be allowed at the track.
Batteries will be subject to a temperature inspection.
The competition batteries are to be placed in a holding area with the batteries from other teams. Ten minutes before your scheduled heat your team may remove the batteries from the holding area.

## ::Slow Vehicles::

While we encourage each team to do their individual best, slow vehicles have become a safety problem. Driving a vehicle at a slow speed when the batteries are low harms the battery life, and causes a potentially dangerous situation on the track. It has been decided that when a vehicle takes 60 seconds or longer to complete a lap on the course, it will be required to pit and will not be allowed back onto the track.

## ::Passing::

Slow cars are to stay to the INSIDE of the track. The Race Steward will explain the proper passing procedure at the drivers meeting. Should you have any questions, this will be the time to ask. If your drivers fail to follow the rules, they will be black flagged immediately. YOUR WARNING IS THE EXPLAINATION AT THE DRIVERS MEETING. We cannot sacrifice safety on the track. Any additional questions concerning the passing/no passing areas can be discussed with the race steward.

## :: Unsafe Passing ::

When passing another vehicle, you must pass in the DESIGNATED AREA ONLY. Remember that the slow cars will be flagged to the inside of the track.

## :: End of Competition Inspection ::

At the end of each heat, each driver is to pull into the pit area and remain in the vehicle until the vehicle is inspected or you are told to take the vehicle to your team's area. We will be mixing classes together so several vehicles may need to be inspected at the end of each heat. TEAM MEMBERS WILL NOT BE ALLOWED TO ASSIST THE DRIVER. **The Adviser will be the only person to assist the driver.**

*Below is the new Liability release and medical authorization form (3 pages). Please complete the form for EACH driver, and mail in 2 copies of each completed form.

# CT ELECTRATHON CHALLENGE

## Liability Release/Medical Authorization

You must read this form and sign it before participating in any **CT ELECTRATHON CHALLENGE** event during the year 2005-2006. To participate as a driver in the event, you and a parent or legal guardian must read and sign this form. To drive you must be at least 16 years old and hold a valid driver's license.

I the undersigned, voluntarily agree to the following:

- I agree to assume all costs related to any medical treatment; I authorize my insurance company to pay benefits for the costs of such treatment; I also authorize the disclosure of medical information to my insurance for the purpose of any claim.
- I understand each parent must provide his/her own medical insurance; I also understand that I am responsible for any medical or other charges related to participation in the **CT ELECTRATHON CHALLENGE.**
- I give my consent for medical treatment, and permission to event personnel to supervise or perform on-site first aid to minor injuries and to a licensed physician to hospitalize and secure proper treatment (including injections, anesthesia, surgery, or other reasonable and necessary procedures) for the participant **(If you wish to limit medical treatment, draw a line through it or add your comment and initial the changes)**;

***To facilitate a medical situation, please complete the attached medical card.***

School (if student): _____

| Attach copy of driver's license, or other legal photo ID. |
|---|

The participant is participating in each **CT ELECTRATHON CHALLENGE EVENT** under their own free will, and the parent/guardian (if participant is under 18) approves of such participation:

- I am personally responsible for my actions, and I shall conduct myself with sportsmanship
- I shall abide by the rules, conditions, guidelines and decisions of Electrathon America and race/event officials; I understand that this is a non-professional program/event, and changes, delays and/or errors may occur

- I understand that the activities of the day involve risk; I accept the conditions under which each of the events is held; and I accept and assume all risks inherent in each of these competition events.
- I hereby release, hold harmless and indemnify Electrathon America, Lime Rock Park, the CT Electrathon Challenge, Central Connecticut State University, track owner(s), track employees, event sponsors, organizers, officials, volunteers and other persons, organizations or entities associated with the event (**RELEASEES**) from any and all liability, whether injury is caused by my negligence, the negligence of **RELEASEES** or the negligence of any third party, and agree to settle any and all disputes through established event rules and procedures.

**I HAVE READ THIS ENTIRE MEDICAL AUTHORIZATION, RELEASE & LIABILITY WAIVER, I FULLY UNDERSTAND IT, AND I AGREE TO BE LEGALLY BOUND BY IT.**

***READ CAREFULLY BEFORE SIGNING.***

***THIS IS A RELEASE OF YOUR RIGHTS.***

Name of Participant _____

Participant Signature (Date) _____(_____)

**IF PARTICIPANT IS UNDER 18 YEARS OF AGE:**

Name of Parent/Legal Guardian _____

Parent/Legal Guardian
Signature (Date) _____(_____)

# ::Medical History Form::
# Complete BOTH Sections

## Driver

NAME: _____

RIDER'S NATIONALITY: _____

DATE OF BIRTH: _____ ❑ M ❑ F

ADDRESS: _____

_____

PHONE: _____

BLOOD TYPE: _____

ALLERGIES TO MEDICINE: _____

_____

_____

EMERGENCY CONTACT:
(MUST BE OTHER THAN SELF) _____

_____

PHONE: _____

## Primary Physician

NAME: _____

ADDRESS: _____

_____

PHONE: _____

HEALTH INSURANCE INFO:

CARRIER: _____

CARD #: _____

SOCIAL SECURITY #: _____

## Medical History

Complete all sections.

• Any serious illnesses? (diabetes, heart disease, seizures, asthma):

_____

• Recent surgery? _____

• Are you pregnant? ❑ No ❑ Yes

| NO | YES | |
|---|---|---|
| ❑ | ❑ | Head Injury or Concussion(s): _____ list dates: _____ |
| ❑ | ❑ | Neck or Back Injuries: _____ list dates: _____ |
| ❑ | ❑ | Fractures or Dislocations: _____ list dates: _____ |
| ❑ | ❑ | Chest or Abdominal injuries: _____ list dates: _____ |
| ❑ | ❑ | Normal Vision |
| ❑ | ❑ | Do you wear contacts? |
| ❑ | ❑ | Normal Hearing |

Last Tetanus Immunization Date: _____

Current Medications: _____

_____


## Driver

NAME: _____

RIDER'S NATIONALITY: _____

DATE OF BIRTH: _____ ❑ M ❑ F

ADDRESS: _____

_____

PHONE: _____

BLOOD TYPE: _____

ALLERGIES TO MEDICINE: _____

_____

_____

EMERGENCY CONTACT:
(MUST BE OTHER THAN SELF) _____

_____

PHONE: _____

## Primary Physician

NAME: _____

ADDRESS: _____

_____

PHONE: _____

HEALTH INSURANCE INFO:

CARRIER: _____

CARD #: _____

SOCIAL SECURITY #: _____

## Medical History

Complete all sections.

• Any serious illnesses? (diabetes, heart disease, seizures, asthma):

_____

• Recent surgery? _____

• Are you pregnant? ❑ No ❑ Yes

| NO | YES | |
|---|---|---|
| ❑ | ❑ | Head Injury or Concussion(s): _____ list dates: _____ |
| ❑ | ❑ | Neck or Back Injuries: _____ list dates: _____ |
| ❑ | ❑ | Fractures or Dislocations: _____ list dates: _____ |
| ❑ | ❑ | Chest or Abdominal injuries: _____ list dates: _____ |
| ❑ | ❑ | Normal Vision |
| ❑ | ❑ | Do you wear contacts? |
| ❑ | ❑ | Normal Hearing |

Last Tetanus Immunization Date: _____

Current Medications: _____

_____

# VEHICLE INSPECTION FORM

Name (car owner or team leader)

School or Team Name (if applicable)

Address (This is where awards and race information will be sent)

City State ZIP

Phone Number E-Mail Address

Car Number State INSPECTION COMPLETED (Initialed by Inspector)

**Class:**

☐ Standard ☐ Experimental
All classes must meet Electrathon America Rules

**Division:**

☐ High School ☐ College ☐ Open

☐ Entry Fees Paid

☐ Liability Form Signed

☐ Electrathon America Competitor Membership

## DRIVER INSPECTION:

Driver Name _____

Driver's License Number _____ State ___ Expires _____

☐ Long-Sleeve Shirt, long pants, and shoes
☐ Helmet (DOT approved motorcycle style)
☐ Gloves (not required with full canopy)
☐ Eye Protection (safety glasses, goggles)

Driver weight _____ lbs.
Ballast weight _____ lbs.
Total weight _____ lbs. (180 lbs. minimum to compete)

List items used for ballast _____

## VEHICLE INSPECTION:

☐ Vehicle number properly displayed and easily visible (min. 6" high)
☐ Structure or body shell protects driver from harm
☐ Bottom pan protects driver from contact with track
☐ No exposed sharp edges or components
☐ Axle diameter is ½" or 12mm min. unless supported both ends
☐ Safety wire or cotter pins on all cantilevered axle nuts
☐ Frame and shell adequately protect driver
☐ No for loose fittings and fasteners
☐ All tires are pneumatic (inflated)
☐ Tire tread is in acceptable condition
☐ Roll bar or bulkhead can support driver's weight
☐ Roll bar or bulkhead is braced forward or rearward
☐ Power kill switch outside the vehicle in a 4" red triangle
☐ Correct size fuse or circuit breaker between battery and motor
☐ Wiring is safely installed - terminals tight, insulation good, etc.
☐ Auto shut-off throttle
☐ Batteries are securely mounted to the frame and/or body
☐ Batteries are enclosed or covered

## VEHICLE INSPECTION WITH DRIVER INSIDE:

☐ Guards (if necessary to protect driver from moving parts
☐ Ballast (if required) mounted securely
☐ Good visibility and field of vision
☐ Rear view mirrors, 8 square inches
☐ Top of roll bar or bulkhead is above driver's helmet
☐ Inside kill switch is driver accessible
☐ Brake inspection - car will not roll when pushed
☐ Steering inspection- appears tight and stable at speed, will turn 25' radius
☐ Vehicle stability test
☐ 5-point (minimum) lap and shoulder belt hold driver securely in position
☐ Vehicle exit test in 20 seconds (includes canopy and seat belts)

System voltage _____V ☐ AGM ☐ Gel Cell Battery quantity_____ Battery Weight_____lbs,

Battery Manufacturer_____ Brand_____ Group Size_____



Registration_Forms1-13.jpg

# INFORMATION FACT SHEET

**Car Pics Here…**

**(Place pictures of car in the boxes above)**

High School:
Car#:

## Description of Materials

### Frame

Type of Material: Vendor:
Thickness: Diameter:

### Tires

Brand Name:
Size:

### Front Wheels

Wheel Diameter:
MFG of Hub: Model:
Size of Spokes: Number of Spokes:
MFG of Rim: Model:

### Rear Wheels

Wheel Diameter:
MFG of Hub: Model:
Size of Spokes: Number of Spokes:
MFG of Rim: Model:
Chain Size:

### Sprockets

Motor Sprocket # of Teeth: Wheel # of Teeth:



Registration_Forms1-14.jpg

Motor
MFG:_
Model #:

Fuse
MFG:
Size:

Controller
MFG:
Model:

Spindle Assembly
MFG:
Model:

Tie Rod End
MFG:
Diameter of Stud/Hole:

Circuit Breaker
MFG:
Model #:

Pot Box
MFG:_
Model #:

Voltage/Amp Meter
MFG:
Model:

Steering Wheel
MFG:
Diameter:

Canopy/Windshield
Type of Glass Material:
Thickness of Material:

Mirrors

Area of Mirror Glass:
# of Mirrors:

## Batteries

MFG:
Model:
Weight of Battery:

## Floor Pan

Type of Material: __
Thickness:

Weight of Car without Battery (no driver):

## Paint

Type of Finish:

## WHAT TO SEND IN:

- **Completed Registration Form**. (Page 3). Please include the Number of your vehicle!
- **Complete Liability Release Form Information** (Page 4).
- **Signed Rules and Regulations** Form. (Page 5).
- **Completed Liability Release Form** and **Medical Authorization Form**. (2 copies!)(Pages 9, 10, 11).
- **Payment for Vehicles**. Please make checks payable to:

**CT Electrathon Challenge.**

- **Please send ALL forms and check under one cover to:**

**Mike Grella**
**76 Chestnut Hill**
**Litchfield, CT 06759**

## WHAT NOT TO SEND IN:

- **Vehicle Inspection Form**. (Page 12). This is for you reference to make sure your vehicle will pass inspection even before you get to the event. This will help you solve any problems ahead of time.
- **Information Fact Sheet**. (Pages 13, 14, 15). This is a fact sheet that you can complete and hand out at the event. We encourage that you take the time to complete this form, since it is required to enter the Best in Show event. Also, please print out roughly 50 copies, to distribute to other teams.