

## Week 8

Q84- Are we allowed to make rails to guide our vehicle and does the vehicle have to have wheels?

No, see [Q19](#) and [Q52](#).

Q85- If we transform wind energy into electrical or mechanical energy, are we allowed to use this energy to move our vehicle forward? The erratum is somewhat confusing to us.

Yes. See [Rules 2.2](#), [2.3](#) and [2.4](#). The rule modification only allows participants to add devices that have nothing to do with moving the vehicle. For example, an electrical motor supplied by a battery opens a sail. The energy from the battery and the electrical motor do not contribute to moving the vehicle; it is the wind energy that applies pressure to the sail and moves the latter.

Q86- We've noticed that the purchased fans naturally oscillate for 90 seconds. Are we allowed to fix them to the floor without modifying their structure but simply to hold them in place?

During the local finals at the individual colleges, it is up to the organisers at the institution to make decisions about this type of detail. During the provincial

finals, if we need to make a decision regarding this issue, we will do so then.

Q87- What would happen to the scoring if a vehicle were to go far enough outside the 3-metre diameter circle that it didn't cross one or two of the lines marking one eighth of the track, but then came back onto the track and continued running laps around it?

The laps would be counted normally as long as the vehicle crossed the (starting) line. The lines marking one eighth of the track are only significant during the final, incomplete lap. During this final lap, if the vehicle were to miss crossing one or two of those lines, they would still be counted as long as the vehicle returned to the track and crossed one final one-eighth line before stopping. It goes without saying that the vehicle must always cross the starting line during each lap so that the time can be recorded and the lap counted.

Q88- Are we allowed to use a battery to guide the wheels (servomotors) and are we allowed to use a remote control device?

The vehicle must be autonomous, so a remote control device cannot be used. Servomotors are allowed as long as they are not remote-controlled. Of course, the battery used to run the servomotor must comply with modified Rule 2.1 (see the February 26 erratum).

Q89- I would like to know the dimensions of the fans (blade diameter and height, if possible).

Information about the official contest fan and how to get one is provided on the contest Web site; click the "Challenge" tab and then the "Official material" tab. The model number is also provided in the contest booklet. In any case, the person in charge of the contest at your college must be able to obtain that information. You can then measure the fan to get any dimension-related information you feel you will need.

Q90- When the fans are turned on, are we allowed to delay the departure of our vehicle so that energy can be stored, and then allow the vehicle to run for the remainder of our turn.

The 90-second period is the time during which the fans supply wind energy. During this time, your vehicle can be immobile while accumulating energy (with or without the contribution of the transformer base). Your vehicle can also start to move at any time during this 90-second period. However, you are not allowed to turn on your starting device (if you use one) until after the 90-second period is over (see Rule 4.6 in the booklet).

Q91- M vehicle rests on the transformer base during the 90 seconds the fans are on. At the end of this time, I take the vehicle in one hand, place it on the track and turn on the starting mechanism with the same hand. Is this considered to be a single action or not (movement + starting)?

No, it is several consecutive actions. What you've just described is actually 3 different actions: picking up the vehicle, releasing it and turning on the mechanism.