



Regulation

2018.ver2.1

25 June 2018

W.G.C Organising Committee
W.G.C Regulation Development Committee

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WGC solar car rally (& Green Fleet Car) regulation

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General provision

General provision

1. Name of the event.

This event is named as “World Green Challenge” (“W.G.C.” in short).

2. Mission and Values

1) TO ENCOURAGE DEVELOPING CONJUGATING FOR CLEAN ENERGY SUCH AS SOLAR, AND TO PROVIDE THE OPPORTUNITY FOR TECHNICAL EXPERIMENT FOR ENGINEERS, AND DREAMS FOR YOUTHS.

2) TO RISE INTEREST IN ENVIRONMENTAL AND ENERGY ISSUES AND TO DISSEMINATING EFFECTIVENESS AND POTENTIAL OF SOLAR ENERGY ETC.

2 MAIN SUBJECT 『ODYSSEY FOR CLEAN ENERGY AND CHALLENGE FOR NEW TECHNOLOGY』

3 TAGLINE 『THE SUN IS OUR FRIEND』

3. Event organiser

IT IS NAMED AS “WORLD GREEN CHALLENGE ORGANISING COMMITTEE” (HEREINAFTER CALLED ‘ORGANISING COMMITTEE’)

4. Office and supervisor

SUPERVISOR: 『THE WORLD GREEN CHALLENGE EXECUTIVE COMMITTEE』

Office: Non Profit Organisation 「Clean Energy Alliance」

5. Schedule

○ 『World Green Challenge Solar bicycle Race』

11(Sat) and 12(Sun) August 2018

Category A and B, 100Km marathon

Category S and F, Endurance Rally

- 『World Green Challenge Solar Car Rally』
7 to 10(Tue to Fri) August 2018

6. Place

The event will be held at 『Ogata Village Solar Sports Line』
(25.0km/lap)

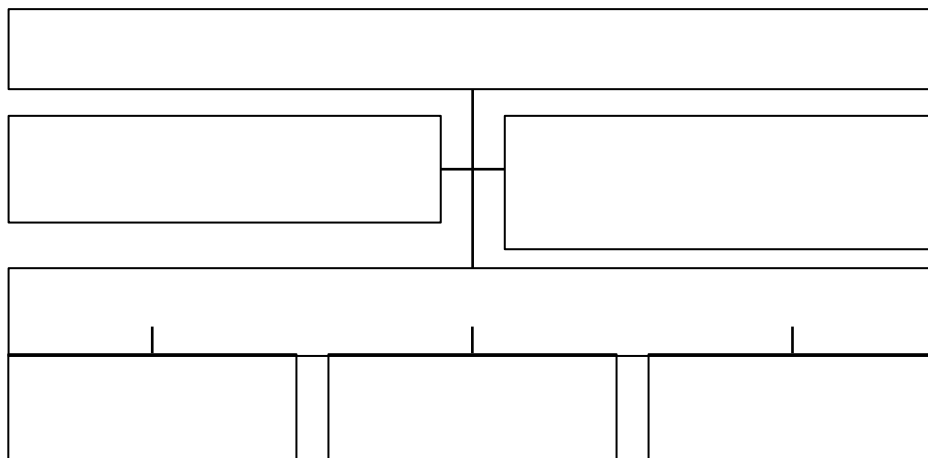
7. Supports

Akita prefecture, Ogata village, Japan solar energy society, Kankyo
Akita Kenmin Forum (Akita civic forum of environment)

8. Sponsors

Companies, organisations, associations support us.

9. Event Organisation Chart



10. Event officials

Refer to the official name list.

11. Office

The office is set in Non-Profit Organisation “Clean Energy Alliance”
Kenmin Centre, 1-17 Chuo, Ogata mura, Minami-Akita gun, Akita,

010-0445 JAPAN

TEL/FAX +81 - 185 - 45 - 3339

E-mail wsr@ogata.or.jp



World Green Challenge Solar Car Rally
(Solar Car/ Green Fleet Car)

Sporting and Technical Regulations

<1> Management

1. Objects

- (1) This event will be held to provide opportunities for engineers and students who play a role in the next generation.
- (2) To contribute to popularisation and development for new energy technologies, and energy conservation.
- (3) Aim for sustainable society enabled by new technologies.

2. Policy of operation

This event is operated with funding from companies and organisations cognisant of the values and missions of the event, and by volunteers from participating teams.

3. Eligibility

Teams wish to participate the event must understand and compliant with the regulations.

4. Participating vehicles

Eligible vehicles for the event are as follows.

- (1) Vehicles contribute to popularisation and development for renewable energy, and energy conservation technologies.
- (2) Vehicles have educational and research values.
- (3) Vehicles conform to the regulations for international and domestic events.
- (4) Vehicles have participated the events mentioned above.
- (5) Vehicles which the judging committee specially approved.
- (6) The vehicle meet one of above and passed official scrutineering in the event.

<2>Entry

5. Category

- (1) Green Fleet Challenge

Vehicles qualified to 4.1 and 4.2, and it do not compete for speed.

(2) Solar Car Challenge

The class for vehicles qualified to 4.3 and 4.4.

. Challenger Class

Vehicles conform to **【WSC2017】** Challenger Class or FIA Olympia Class.

. Cruiser Class

Vehicles conform to **【WSC2017】** Cruiser Class.

. Enjoy Class

Vehicles with commercially available solar panels which doesn't exceed 480W in total generation.

. Adventure Class

Vehicles designed to participate in previous events but not eligible for any classes above.

(3) The organiser may set lead acid battery class.

(4) The organiser may set junior class.

(Junior class is open for high school teams which uses lead acid battery, and half of the team members must be students.)

6. Entitlement of a team manager and drivers.

(1) Drivers must hold appropriate driver's license which allow to drive on the public road in Japan, or track license which allows to drive closed circuits in Japan. This shall not apply if the organiser gives a special permit.

(2) Drivers or passengers continuously on board for over three hours must have rest at least twenty minutes before proceeding the next lap.

(3) Driver and passenger change can be made only at the pit stop during competition.

- (4) Team manager must be the age of 20 or higher, and responsible for team members' activities. Team members under the age of 20 must submit a consent form signed by parent for application of entry.

7. Mass of drivers

- (1) The mass of each driver or passenger, with helmet and driving clothes, must be no less than 80 kg. If the mass of a driver or passenger is less than 80 kg, ballast will be added to make up the difference.
- (2) Up to two ballasts are allowed to use. One shared ballast is for all drivers and another is to adjust the weight difference among drivers. If the ballast exceed 10Kg, it may be divided in two.
- (3) Drivers must load the ballasts on board while driving.
- (4) Ballasts must be fixed with bolts or belts to the vehicle to prevent rolling or moving. However it must not be used as structure of the vehicle.
- (5) Ballast for each driver may be re-measured during competition at any time.
- (6) The mass of drivers is not adjusted in Green Fleet Challenge.
- (7) A driver and a passenger must be on board while Cruiser Class vehicle is moving.

8. Application for entry

- (1) Applications for entry is open from **1 June 2018 to 30 June 2018**.
- (2) Specifications of participating vehicle or team members may be changed before scheduled official scrutineering.
- (3) Specification of batteries must not be changed after **30 June 2018**. The organiser doesn't guarantee to update those changes in the official list.

9. Entry fees

- (1) 35,000 Japanese Yen is applicable for each entry.

- (2) In the case organiser may ask participants to incur necessary costs, it shall be based on “Participating Requirement” separately defined.

10. Insurance, Compensation for damages

- (1) Team members are responsible for all processing in case of damage caused by accident or loss.
- (2) Team members must be aware that the organiser, event officials and clerk of the course, are exempt from any responsibilities for compensation for damages.
- (3) All team members must hold designated insurance policy for this event.

<3>Technical Regulations

11. Power source

- (1) Green Fleet Challenge enables variety of proposal for sustainable motorised society including energy saving technologies. However, the organiser reserves the right to refuse participation of the vehicles if judging committee deemed that it doesn't meet the value or philosophy of the event, or may cause hazard.
- (2) Solar Car Challenge vehicles must meet the regulations for past WSR and WGC event or other events previously participated with the vehicle. The team constructing new vehicle must meet the regulations for the event which the team will try for.
- (3) Allowable total area of solar cells are as shown below. Each team must submit drawings and calculation tables to demonstrate conformance. (Exception in 4.5 shall be allowed for the area.)
 1. Challenger Class:
silicon 4m², thin film GaAs 3.56m², multi-junction 2.64m²
 2. Cruiser Class:
silicon 5m², thin film GaAs 4.44m², multi-junction 3.3m²
 3. Adventure Class:
silicon 6m², compound semiconductor 3m²

- (4) Solar panels for Enjoy Class must be market products, and proven by data sheets or catalogues that the performance is no greater than 480W.
- (5) In case entrants want to use solar panels other than above or combination of different types, The judging committee may discuss it.

12. Dimensions of Vehicle.

- (1) Dimensions of Green Fleet Challenge vehicle are as shown below.
 - . Must not exceed 5m long, 1.8m wide and 1.6m high.
(This shall not apply if judging committee approved)
 - . The distance between the front tyre centres and the distance between the rear tyre centres of fuel cell vehicle must be 1m or wider.
(This shall not apply if judging committee approved)
- (2) Dimensions of Solar Car Challenge vehicle are shown below.
 - . 【Challenger Class and Cruiser Class】
Must not exceed 5.0m long, 2.2m wide and 1.6m high.
 - . 【Enjoy Class】
Must not exceed 5m long, 1.8m wide and 1.6m high.
 - . 【Adventure Class】
Must not exceed 6m long, 2m wide and 1.6m high.
This shall not apply if judging committee recognised that the vehicle participated in the past event.

13. Battery: The total mass of batteries is shown as followings.

- (1) Green Fleet Challenge
Unlimited

(2) Solar Car Challenge

1. Challenger Class

LiFePO4 20kg (Specification, case is not included, BMS and protection circuit required for safety.)

Li-polymer 10kg (Same as above)

Li-ion 10kg (Same as above)

Li-S 7.5kg (Same as above)

NiMH 30kg (Specification, case is not included)

Lead acid (VRLA) 62.5kg (Same as above)

2. Adventure Class

LiFePO4 10kg (Specification, case is not included, BMS and protection circuit required for safety.)

Li-polymer 5kg (Specification, case is not included, BMS and protection circuit required for safety.)

Li-ion 5kg (Same as above)

NiMH 15kg (Specification, case is not included)

Lead acid (VRLA) 62.5kg (Same as above)

3. Enjoy Class, Challenger Class (Lead acid subclass),

Adventure Class (Lead acid subclass)

Lead acid (VRLA type, on market products)

62.5kg (Specification value, case is not included)

4. Cruiser Class

LiFePO4 30kg (Specification, case is not included, BMS and protection circuit required for safety.)

Lead acid (VRLA type, on market products)

125kg (Specification value, case is not included)

Li-polymer 15kg (Specification, case is not included, BMS and protection circuit required for safety.)

Li-ion 15kg (Same as above)

NiMH 45kg (Specification, case is not included)

- (3) Batteries, installed as main power source, must be rechargeable.
- (4) Once the first day of the event starts, Solar challenge vehicle can only charged batteries from solar radiation. It also can be charged from regeneration brake system during competition. (This does not apply to the Green Fleet Challenge.)
- (5) Same batteries and same number of cells, which installed at the start, must be used all the way to goal line. (This does not apply to the Green Fleet Challenge.)
- (6) Batteries must be accommodated in storage cases which can be sealed.
The storage case shall not be included in the weight of batteries.
- (7) Battery storage cases shall be within 4 pieces.
- (8) Installation of the Battery must be use bolts or belts to prevent rolling or moving.
- (9) Charging the batteries from an unauthorised source will lead to exclusion from the event. (This does not apply to the Green Fleet Challenge.)
- (10) Batteries must be able to prove nominal mass by data sheet (includes catalogues) from the manufacturer. However, the actual weight measured at scrutineering has the highest priority.
- (11) Batteries must not be replaced except in case of accident or malfunction. Only pre-registered spare batteries can replace with approval from the clerk of the course. However penalties may apply in that case.
- (12) Vehicles installed "power capacitor must be able to prove that the capacitors are completely discharged at the start on first day.
The term of "power capacitor" means relatively large capacity (includes super capacitors) which is regarded as it temporary stores energy to run the vehicle.
- (13) Vehicles uses flywheel must be able to prove that it isn't rotating before start.
- (14) The lead acid battery used for the event must be standard

production VRLA type.

14. Impound of batteries.

- (1) All the batteries, registered and shielded for the event must be impounded at designated storage overnight.
- (2) The batteries registered as spares are stored at designated storage during competition. (This does not apply to the team doesn't need spares.)

15. Stability

The competition vehicle must be safe and must not lose control at all achievable speeds and in crosswinds. The competition committee may order to improve or suspend if there are safety issues.

16. Brakes

- (1) Competition vehicles must be equipped with at least two independent brake systems.
- (2) This doesn't include a regeneration brake system.
- (3) It must be able to stop the competition vehicle within 12.5m from 35 Km/h
- (4) Parking brakes must be independent from main brakes, and must be capable of holding the competition vehicle on a 8% incline or decline.

17. Vision of drivers.

- (1) Vision for all directions must be able to maintain equivalent to ordinary passenger vehicles.
- (2) Rear vision system may be electronic or mirrors.
- (3) The eyes of every driver must be more than 70 cm above the ground. However, it must be more than 60 cm for the vehicle shorter than 4m long.

8. Electrical components

- (1) Competition vehicles must be equipped brake lamps (red, visible at 30m in rear), direction indicator(60 to 120 flashes per minute, amber, visible at 30m from front and rear), hazard lamp, Audible warning device (minimum 90dB at 2m in front).
- (2) A 12V 3A small lead acid VRLA battery can be used for electrical components as mentioned in previous section. It must be independent from main power batteries. It is not included in the total mass of batteries in section 13, and may be replaced and recharged during competition.
- (3) Internal batteries of computer systems (must be standard model less than 100Wh) installed in the competition vehicle is not included in the mass of battery in section 13.
- (4) The batteries to start fuel cells is not included in the mass of battery in section 13.

19. Radios

- (1) Teams wish to use radios (includes mobile phones and PHS) must comply with Japanese Radio Act and must use hands-free devices.
- (2) Internal batteries for radios or other portable devices, used by drivers, is not included in the mass of battery in section 13 and may be replaced or recharged.

20. Other devices

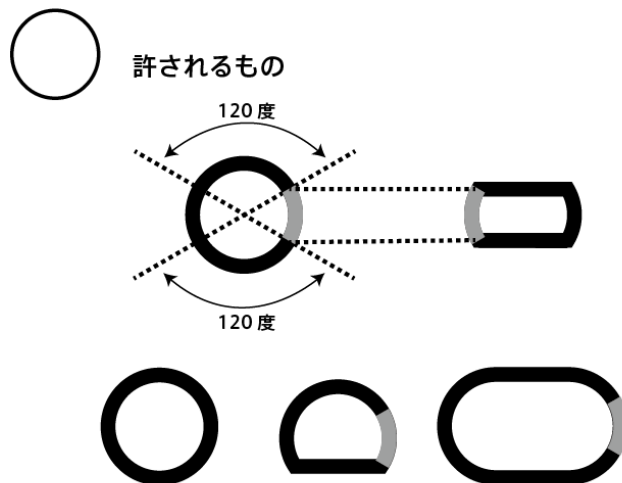
- (1) Driver must be protected from electrical shock.
- (2) High voltage warning sign must be presented on the parts uses over 30V.
- (3) Protection covers must be placed for high speed rotating parts (chains, sprockets, gears, shafts).
- (4) Safety belt (at least with three-point harness) must be equipped.
- (5) Speed meter: An accurate speed mater must be equipped.
- (6) Towing bracket: All vehicle must be securely attached a tow hook

with hole (painted in yellow, red or Amber).

- (7) Fire extinguisher: All vehicles are required to attach a hand operating fire extinguisher which contains at least 2 pounds (907 grams) of powder or halogen extinguishant.
- (8) Cockpit: Sharp protruding objects must not be in the cockpit.
- (9) Steering: Competition vehicles must quip circle shape steering.

Exceptions may apply in section4.4

See drawings below



Refer to World solar challenge regulations.

- (10) Seat Angle: The angle between each occupant's shoulders, hips and knees must be more than 90° and heels must be below their hip point Exceptions may apply in section4.4
- (11) Doors: Vehicles with closed body must equip doors or hatch which can be opened and closed from inside and outside of cockpit.
- (12) Fixing canopy, door or hatch with adhesive tape is not permitted.
- (13) Driver must be able to egress from the driving position in less than 15 seconds, without assistance.

- (14) All competition vehicle should have structure to protect head of the driver in case of overturn.
- (15) All competition vehicle must equip circuit breaker (circuit-breaking switch can be activated from outside) and display a red arrow on blue back ground.
- (16) Challenger Class and Cruiser Class Vehicle must be supported by four wheels.

21. Specification documents.

- (1) Teams must submit data sheet of batteries from the manufacturer by **30 June 2018**. However it may not be required if the batteries were used in previous WGC event.
- (2) Teams wish to use lithium-ion or lithium-polymer batteries, must submit safety declaration.

22. Dishonest act

The team, deemed by the judging committee as the member or members deliberately breach the regulation and acting to gain an unfair advantage over others, is disqualified.

<4>Official scrutineering

23. Official scrutineering

- (1) All the competition vehicle must attend official scrutineering in road ready condition on stated date and place. The official scrutineering is carried out to ensure that the competition vehicles meet the regulation. The vehicle failed to pass the scrutineering, cannot start in the competition. (This shall not apply if the competition committee approved.)
- (2) Each competition vehicle will be held in the pits after scrutineering or during competition hours. The team, late for scrutineering or requests re-inspection will attract penalties.

24. Compulsory documents

Drivers must hold appropriate driver's license which allow to drive on the public road in Japan, or track license which allows to drive closed tracks in Japan. (This shall not apply if the competition committee approved.) See 6.1

<5>Competition

25. Driving

- (1) All the competition vehicle can run in only designated tracks during scrutineering and competition.
- (2) Only the registered drivers can drive competition vehicles during competition.
- (3) Drivers must not use short cut route, or drive the wrong way up. However, vehicles can be pushed to reverse direction by pit crews only on the pit road. In this case, the team must get permission from course Marshall.
- (4) Drivers must move the vehicle to safe place as soon as possible in case the vehicle have to stop on the track, so as not to cause hazard or to obstruct other vehicles, then put stop an indicator plate or a yellow flag, and turn the hazard warning lamps on.
- (5) Drivers must wear helmet and fasten seat belts which passed the scrutineering while driving in the competition. Helmets must comply with equal or higher than following standards. However, the helmets damaged or previously dropped, or is older the ten years cannot be used.
 - 1) MFJ/JAF/FIA Certified
 - 2) JIS-T8133,2007 Second Class
Full-face-type and open-face-type only
 - 3) Snell standard (Automotive)
(Snell95/DOT/ISO motorcycle standards.)
- (6) Competition vehicles use the left lane (Travel Lane) in principle.

When a faster vehicle catch a slower vehicle, The overtaking vehicle must use the right lane (Overtaking Lane) for overtaking after confirmed safety. The vehicle overtaken must not obstruct the overtaking vehicle.

- (7) Drivers must comply with speed limit or no overtaking zone same as public road.

26. Start

- (1) Starting order on the first day is determined under separated regulation. After the second day, it is determined by the positions in the previous day.
- (2) All the competition vehicle must be present on the grids 15 minutes before starting time.
- (3) The vehicle, late for 15 minutes before start in any reasons, will start from the rear-most grid.
- (4) Vehicle, couldn't get to the grid, will start from the pit, and subject to penalty.

27. Deadline for goal

- (1) Checker flag will be given to all the competition vehicle after 16:00 on Day1 and Day2, and 15:00 on the last days. The vehicles must not proceed to the next lap after the time.
- (2) The exit of the pit road will be closed at 16:00 on Day1 and Day2, and at 15:00 on the last day.
- (3) The competition finishes after 17:00 on Day1 and Day2, and 16:00 on the last day. The last record passed through the control line after the time, will make an official record.
- (4) Penalties apply to the vehicle stay on the course after the finish time.
- (5) The position is determined with laps and overtime points. If two teams completed the same number of laps, the team with shorter time elapsed from the reference time, is ranked in higher position.

However, if overtime points reached to 180, a lap is

subtracted from total laps.

- (6) Ranking for Green Fleet Challenge is determined by separated subsidiary competition regulations.

28. Timing

Protest for timing is not accepted.

29. Relocation, Transport

- (1) Competition vehicle may be pushed by humans to move it to the safe location only in emergency case.
- (2) Vehicles can be pushed to move by hands from the finish line to the pit and the pit to start line.
- (3) Driver can carry the vehicle to the pit by transporter provided from the competition committee, if the competition vehicle cannot be repaired on site. See 32.4
- (4) Competition vehicle could not return by the official finish time are subject to penalty, and the vehicle cannot move by its own power is collected by the event competition committee.
- (5) Any regeneration system cannot be activated during transportation.

30. Retire

A team may retire by forwarding a form to the competition committee.

31. Manners

All participating vehicles and team members must carry out safety driving and ordered competition with good sense to prevent accidents.

<6>Service

32. Service and repair

- (1) A competition vehicle can receive service in the pit.
- (2) Repairing on the course can be performed only by the driver with

tools carried on the vehicle, except when the vehicle is in a hazardous place (including no overtaking zone).

- (3) If it is impossible to repair by the driver or with on-board tools, another team member can carry tools, within a range that one person can carry by hands, to the vehicle on the course. In this case, the vehicle prepared by the event competition committee will take the member to the site, and it is subject to penalty.
- (4) If it is impossible to repair on the course, the vehicle can be transported to the pit. In this case, the event competition committee is in charge of transportation and it is subject to penalty.
- (5) Competition vehicle must not move to the place where the course marshals cannot observe.
- (6) Chassis as a basic structure of competition vehicle cannot be replaced.
- (7) When bringing competition vehicle out of competition site for repairing, the team must obtain a permission from the competition committee.

<7>Course marshal

33. Course Marshall

- (1) Course marshals are allocated on the course and each related facilities.
- (2) Course marshals will check moves of competition vehicles, drivers and pit crews, and control for safety progress of the competition. Course marshals also may order to stop the vehicles that are obviously driving in danger.
- (3) Course marshals do not interpret or advise on this regulation.
- (4) Signals to the driver during competition will be made by the flag signals by the course marshals.
- (5) All the participants must participate the competition with the spirit of mutual aid, and with understanding that the volunteer members

from teams are in charge of course marshals.

<8> Signage, Publication of result

34. Sticker of the event

- (1) The event competition committee provides the signage with the logo mark of the event and the sponsors.

These signages shall be attached on the competition vehicle according to the instruction.

- (2) It requires the areas as follow.

Left and right side: 200mm x 500mm of event signage

- (3) The size of car numbers is 200mm x 200m, and they shall be attached on both sides.

35. Publicity Rights

It is the condition of participation that the teams agree that the event organising committee and the major sponsors use their name and photos for publicity.

<9> Breach of Regulations and Penalty.

36. Behaviours subject to deliberation by the judge committee

The judge committee may apply penalties to the team commits following violations. (See penalty list)

1. misrepresentation
2. Breach of the regulations
3. Dangerous drive
4. Offences mentioned in 29
5. failure to observe a request by police or event officials
6. obstructing overtaking vehicles
7. wilful damage or interference to property
8. failure to follow the course instructions
9. exceeding the deadline for goal
10. exceeding any posted speed limit

11. repairing and maintenance vehicles subject to penalties

37. Disqualification

Teams committed the following offences shall be disqualified.

1. unauthorised battery replacement (See 13)
2. unauthorised breaking of seals (See 14)
3. charging batteries from the unauthorised power systems (See 13)
4. serious offences (See 22)
5. serious breach of manners (See 22)
6. other serious breach of the regulations

38. Handicap

- (1) Handicap may apply to Adventure Class vehicles with separated subsidiary competition regulation according to the regulation which the vehicle conform to.
- (2) Handicap may apply to Cruiser Class vehicles with separated subsidiary competition regulation according to its practicality.

<10> Result of race

39. Determination of the winner and positions.

The winner and positions are determined with separated subsidiary competition regulations.

39. On-going status

On-going status will be announced time to time during competition. The on-going status is provisional, and does not include penalties. On-going status shall not be used as advertisement.

40. Final result

The final result will be announced by the event organisation committee with approval of the clerk of the course.

<11>Application of regulations and supplements

42. Interpretation of this regulations

Details of rules for management not described in this regulations, instructions to the participants, or essential instructions that arise after the announcement of this regulation, will be noticed by official announcement. Official announcement is noticed to all teams as follows.

- (1) sent to pre-registered email address until 31 July 2018, and displayed on the designated board by the even organising committee as of the date.
- (2) noticed in the briefing held as necessary before or during competition period.
- (3) noticed by on-site announce in emergency case.

【Supplementary regulations】

This regulations applies to 2018 World Green Challenge and become in effect after on 1 June 2018.

【Penalty list】

Penalties

- A: Add 60 to OT (Over time)
- Demote to B with OT (Over time 180)
- B: Subtract 1 lap

Disqualified:

Penalties applied

<Driving>

- * driving other than designated course A
- * driving by unregistered drivers A
- * driving in wrong direction B
- * Short cut during competition B
- * breach of safety obligations during stopping B
- * fail to wearing helmet and seat belt A
- * obstructing emergency vehicle A
- * breach obligation to follow signal flags. A
- * obstructing overtaking vehicles or travelling vehicles A
- *Pit start A×2
- *Transported due to inability of travel B
- * exceed competition time:
 - Official competition finish time on Day 1 and Day2 will be 18:00.
 - The vehicle cannot finish by the time will be forced to transport. B
 - Official competition finish time on the last day will be 16:00.
 - The vehicle cannot finish by the time will be forced to transport. B
- * wilful obstruction or unsafe driving (Safety driving obligation)
 - Disqualified
- * Exceeding speed limit, first warning B
- * Exceeding speed limit, second time Disqualified

< Driver change >

- * failure to carry the collect ballast at the time of driver change A
- * exceeding driving time by an occupant
 - (continuous 3 hours, 18 hours in total) A

< Pit stop and repair >

- * Reverse driving (only allowed pushing by hands) A
- * failure to follow the instructions at pit-out A
- * failure to follow the instructions during carry in and take out to the pit, and for storing the batteries A
- * repairing on the course (deploy a team member to the vehicle) A

< Batteries >

- * use of reflector panels for charging A
- * late for carry-in the battery to the storage area at night A
- * failure to carry-in the battery to the storage area at night Disqualified
- * unauthorised battery replacement(13) Disqualified
- * charging batteries from unauthorised energy source(13) Disqualified
- * breaking battery seal without authorisation (13) Disqualified
- * replacement of batteries according to 13.11

$$2\text{laps} + \frac{\text{Replaced capacity(Wh)} \times 3}{500\text{Wh}}$$

Subtraction from total laps

※ Round down to the nearest decimal

- * other offences will be determined by the judge committee

【Subsidiary operation rules】

1. The aim

This subsidiary regulations are based on W.G.C regulations, and determines matters to be provided.

2. Handicaps for Adventure Class

Handicaps for 2018 event is as follows

Vehicles for Suzuka Challenge Class / Vehicles that the area of Solar cells meet the current challenger class regulation.	Nil
4 Wheels Solar Vehicles designed for WSC and FIA.	A penalty A will apply every competition day.
3 Wheels Solar Vehicles designed for WSC and FIA.	Two penalty A will apply every competition day.
Other vehicles that the area of solar cells does not meet the current regulation.	Two penalty B will apply every competition day.

3. Handicaps for Cruiser Class

3.1. Practicality Judge

Each competition vehicle must load two 5Kg bags of rice provided from the event in the cabin or luggage space.

The bags must be replaced with other two bags at driver change.

3.2. Media stop

- ① Each competition vehicle must have 30 minutes media stop on Day2. Repairing and maintenance is not allowed during media stop.
- ② During media stop, Cruise Class teams must have a presentation on development and experiment for the vehicle at the location designated by the event official.
Teams can distribute handouts at the time.
- ③ The contents of the presentation are not subject to ranking.

4. Determination of prize winners

4.1. Endurance competition

Teams will be ranked 1st to 3rd by the number of laps completed in decreasing order. If two teams completed the same number of laps, the team with smaller overtime points is ranked in higher position.

Prizes will be presented for each class.

However, in the case there is few participating vehicle in each class, the organiser may join with another class with official notice.

4.2. Green Rally Competition

It is competed by accuracy of laps and time with pre-submitted plan.

The teams has smaller error between actual lap and time, and planed lap and time will be ranked higher and ranked 1st to 3rd in increasing order.

4.3. Green Fleet Challenge

① The ranking is determined by total 300 points. Rank of Green Rally 100 points, Concept of the vehicle and presentation 100 points and driving point 100 point. Scoring system of each category is specified by Green Fleet Challenge subsidiary scoring rules.

② Each competition vehicle must have 30 minutes media stop on each day of competition. Repairing and maintenance is not allowed during media stop.

During media stop on Day2, teams must have a presentation on development and experiment for the vehicle at the location designated by the event official.

Teams can distribute handouts at the time.

4.4. Time Trial Award

Time challenge award will be presented to the top 3 teams which recorded fastest time in the time trial.

4.5. Grand Champion

The team, completed the most laps in all vehicles except Green Fleet Challenge, will be honoured as Grand champion and the overall

winner. If two teams completed the same number of laps, the team with smaller overtime points is ranked in higher position.

5. Starting position

Starting position will be determined by time in time trial. The vehicle failure to start in the time trial will start from the rear-most grid. When there are two or more vehicles, it follows in order of car number.

6. subsidiary rules for driving

6.1. To meet the regulation 25.4, each vehicle must carry a stop display plate or a yellow flag

6.2. Yellow flag must be larger than A4 size.

7. Advance notice of regulation revision

8.1. Prohibiting spot welding between the battery cells (excluding those by manufacturers) will be considered in the regulation Article 13 in next year or later.

8. Battery safety measures

8.1. It is desirable that noncombustible materials are used for the battery case.

Concerning combustible materials, there are cases where modifications are requested during a vehicle inspection.

8.2. To remove the battery in case of an emergency on the course the car is equipped with the necessary tools.

8.3. In case a battery configuration is used that is different from other race, the control circuit etc. used in the original race are indicated and necessary counter-measures are taken so that the shape of the terminal is changed and wrong parts are not used.

8.4. The declarants of regulation 21.1 of the regulation must be present during a vehicle inspection to be able to comply with calls in case of an emergency.

【Revision history】

1. Event date has been changed for 2018 event
2. The load capacity of the lead acid battery was unified to 62.5 kg (excluding cruiser class)
3. Changed the performance adjustment of the adventure class.
4. Detailed detailed rules concerning battery safety measures have been added.

【Disclaimer】

This translation does not guarantee accuracy and integrity with the original Japanese version. The translator and the event organiser is not responsible for the loss or damages caused by inaccuracy of the English translation version.

The original Japanese version always overrides this English version if there is conflict or inconsistency.

Japanese to English translation:

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