



EFRA ANNUAL GENERAL MEETING

HOTEL Sofitel, Brussels.

Belgium

5th to 6th of November 2005

Minutes Section 1/10 Electric

SATURDAY 5th OF NOVEMBER 2005.

The meeting started at:

1. CHAIRMAN'S WELCOME:

A warm welcome to all of you here in Brussels. The fact that I was called to duty as the chairman for both sections after the sudden retirement of Mike was probably for at least the majority of you as big a surprise as it was for me. I had a hard time to working me in on a very short notice and came almost immediately into a mini-crisis around the bodies, had to handle 3 Ec's and a worlds on pretty short notice. My apologies to those who did not get the attention they expected. Most of you do now that I am not a man of lengthy speeches so I suggest we get on with our meeting, thank you for being here today

2. APOLOGIES FOR ABSENCE:

COUNTRY	PRESENT	Section sub	Section sub	EC			EC			WC		
				Buggy 2wd	Buggy 4wd	%	Touring	%	1/12 E	%	Touring	Touing
AUSTRIA	M kramer			18	13	14,4%	13	8,7%	6	0,0588	10	8
BELGIUM	W heremans			6	3	4,2%	6	4,0%	1	0,0098	4	
CROATIA	D Merkaz					0,0%	5	3,3%		0		
CZECH REP.	BY mail			5	5	4,7%		0,0%		0		
DENMARK	SB Holst					0,0%	10	6,7%		0,0%	5	
ESTONIA						0,0%		0,0%		0,0%		
FINLAND	L Kalle			3	3	2,8%	14	9,3%	4	3,9%	8	4
FRANCE	JP Caillaud			8	8	7,4%	8	5,3%	4	3,9%	3	3
GEORGIA						0,0%		0,0%		0,0%		
GERMANY	U Kluver			15	15	14,0%	24	16,0%	10	9,8%	12	10
GREAT BRITAIN	R Gilles - P worsley			36	36	33,5%	21	14,0%	35	34,3%	15	25
GREECE						0,0%		0,0%	1	1,0%		
HOLLAND	F Heinsbroek					0,0%	4	2,7%	2	2,0%	3	2
HUNGARY						0,0%		0,0%		0,0%		
IRELAND	BY mail			3	3	2,8%	4	2,7%		0,0%		
ITALY	A Forato			2	2	1,9%	2	1,3%	2	2,0%	15	5
LUXEMBOURG						0,0%	2	1,3%		0,0%		
NORWAY	S Frode			7	4	5,1%		0,0%		0,0%		
POLAND						0,0%		0,0%		0,0%		
PORTUGAL						0,0%		0,0%		0,0%	3	
ROMANIA						0,0%		0,0%		0,0%		
RUSSIA	BY mail					0,0%	4	2,7%		0,0%	3	
SLOVAK REP.	BY mail					0,0%	4	2,7%		0,0%	4	
SLOVENIA	BY mail					0,0%	3	2,0%		0,0%	3	
SPAIN	X Llobregat			6	6	5,6%	9	6,0%	35	34,3%	10	12
SWEDEN	R Lee			1	1	0,9%	7	4,7%	2	2,0%	9	8
SWITZERLAND	P Imboden			3	3	2,8%	10	6,7%		0,0%	4	1
	Totals			113	102	100,0%	150	100,0%	102	100,0%	111	74

Others present : J. Spencer, J. Lautenbach, S. Köhler, C. Hardisty L. Heremans

3 MINUTES OF 2004 SECTION MEETINGS

6th-7th of November 2004— Rome, Italy

- a) Matters arising: None
Minutes are accepted:

1/12 – 1/10 E On-Road:

Proposed by: Sweden
Seconded by: France

1/10 E Off-Road:

Proposed by: Great Britain
Seconded by: Belgium

4 CORRESPONDENCE RECEIVED:

Out of several mails and other contacts I took the liberty to start task-groups to tackle two main issues that seem to come back on a regular basis: Motors and T-car bodies. I must admit that one was more successful than the other. The bodies group I am confident will eventually come up with results pretty soon now, the motor-group yielded to a halt merely due to a lack of willingness to co-operate with potential competitors. I still believe that the suggestions of a group of experts are the way to go for drafting rules that are merely pure technical. These groups of experts do also fit in the scope of modernising EFRA and involving the trade so I strongly advise to continue to make use of these to stabilise technical ruling end short-circuiting the feeling that one person influences the meeting with commercial thoughts in mind.

5 CHAIRMAN'S REPORTS

April: 1/12 EC Holland: Swifterband : Although an open class and some elements like weather conditions not helping , I can not say that this event was up to standard expectations on almost all levels like location, hospitality, and organisation but surely not the goodwill of the few club members doing their utmost to cope with the situation. Despite their effort one must conclude that it was not good enough. The event triggered several complaints and an official letter by one of the main present countries. Therefore I can do otherwise than to recommend not reimbursing the bonds and deposits for this race.

BONDS NOT TO BE REPAID

May: 1/10 E Buggy GP: Germany Kongien No info received, not attended, **BONDS TO BE REPAID**

Jul: 1/10 E Buggy GP: Belgium Kampenhout Race full months before the date, usual standards, good show again. I could only spend a few minutes at the race but only got positive feedback afterward **BONDS TO BE REPAID**

Jul: 1/10E Buggy EC: France: Montigny Race well organised, infrastructure ok although small track, proving that a back to basics does not need to mean less good. A pity for the motor incident at the end of the 4'WD, were the rules did cost a huge amount of time to get into a dead-end and only proving that one has to be very careful in the definition of technical measurements. Propose to release all bonded funds for this race **BONDS TO BE REPAID**

Jul: 1/10E Touring EC: Denmark: Glostrup: Another well-organised race, up to expected standards taking into account the unstable weather conditions. Two major issues were dealt with at the track: the tyre treatment and the behaviour on track. I do unconditionally support that any one involved in violence of any kind will be excluded; do not forget the driver is responsible for the people he brings to the track. **BONDS TO BE REPAID**

Aug: 1/10E Buggy WC: Italy: Collegno : The Italians are getting the hang of it, I should say , personally I do regret the tendency, the same as in Denmark, of drivers not to sit within the national blocks but within the team of the sponsor. My personal opinion on that issue is that these Championships are nation linked, not brands and the utmost should be done to turn this tendency, although the future will surely demand for a manufacturers championship one day.
BONDS TO BE REPAID

6 PRESENTATIONS FOR APPLICATIONS EC 2006/7 AND GP's 2006

These proposals have reached us in time; no other proposal can claim precedence after distribution of the agenda. Races and dates allocated at the AGM are final for 2006

Allocated Races:

Date	Status	Country	Venue
	1/12 EC	Grand Canaria	TELDE

4_5 March 2006				
24 _26 Nov 2006		1/10 & 1/12 GP	SWEDEN	
12-14 May 2006		1/10 GP TC	FRANCE	Montbrison
3-6 August 2006		1/10 EC TC	GERMANY	Turkheim LRP Tyres 150pax
5_7 May		1/10Buggy GP	AUSTRIA	Vienna
May?		1/10 Warm-up	ITALY	Collegno
14-19 Aug		1/10Buggy EC	AUSTRIA	Vienna
30 – 2 Jul		1/10Buggy GP	BELGIUM	Kampenhout
01-08 Jul		1/12& 1/10 WC	ITALY	Collegno
29-30 Jul		1/10 Buggy GP	FINLAND	Vaasa

2007

Date	Alt. Date	Status	Country	Venue
20_29 July 07		1/10 TC EC	FRANCE	Montbrison
30 March - 1April 07		1/12 TC EC	SWEDEN	
06 – 11 Aug		1/10Buggy EC	FINLAND	Vaasa

7 **Country ALLOCATIONS, number of drivers:** See table on page one

8 RULE PROPOSALS

CLEANING UP THE HANDBOOK

APPENDIX 3

ELECTRIC SCALE CARS

1. RACETRACK SPECIFICATIONS for electric classes

- 1.1 For EFRA-sanctioned events, where non-permanent tracks are used, the track plans have to be submitted to the Section Chairman for approval.
- 1.2 Track-design must include both right and left-hand turns and one or more straights.
- 1.3 Minimum track length: 120 meters.
- 1.4 Outside barriers must provide a positive means of stopping a car that misses a corner or runs out of control.
- 1.5 Inside barriers are to prevent easy corner cutting or entry into other portions of the track and must ensure that the cars pass over the finish line
- 1.6 Farthest point of the track must not be more than 50 meters away from driver's rostrum.
- 1.7 Time-keeping: preferable on a slow part of the track to enable accurate counting.
- 1.8 Marshall positions based on car numbers must be equally spread around the track. It should be clear which part of the track the specified position is responsible for.
- 1.9 A 220-volt electrical supply must be available at EC meetings with one outlet for every four drivers in close proximity to their pitting area. All safety precautions must be observed.
- 1.10 For the EFRA staggered start system one start line must be marked across the track, preferably close to the time-keeping's pick-up loop position (otherwise two).
- 1.11 All finals will use a "F1" type grid start on 2 meter alternating intervals with two rows of cars. Cars must be placed forward facing at 90 degrees to their markerline or startbox.
- 1.12 Wherever possible the start line(s) must be accessible without crossing any other part of the track.
- 1.13 The start line will be white or yellow coloured, have a minimum width of 5cm and shall cover the total width of the track and will also be marked on the barriers. There shall be marked boxes for the final F1 grid.
- 1.14 Top Qualifying driver may choose his starting position on the grid either left or right, this then to be the configuration for all remaining finals.

- 1.15 Marshall intervention must be minimised by using smooth obstacles such as dots or cones, of appropriated heights.

1.2. Specific track requirements for 1/12 & 1/10 Touring class tracks

- 1.2.1 Indoor track surface must be needle carpet with smooth joints properly attached to the floor.
1.2.2 For onroad racing, only smooth surfaces will be allowed.
1.2.3 Indoor Limits: minimum track width 2 meters between the marking lines. At the start line the track must be at least 3 meters in width as far as the first turn. Marking lines must be either white or yellow, minimum width of 2.5 cm, and must be at least 20 cm away from the edge of the racing surface or track barrier.
1.2.4 The track surface for 1:10 Electric Saloon Cars can be both asphalt or needle carpet.

1.3 Specific track requirements for 1/10 OFF road class tracks

- 1.3.1 Width: 3 metres minimum but exceptionally may be 2,5meters on parts within 10 meters from the rostrum.
1.3.2 The spirit of scaled down off Road racing must be adhered to. (Modified On-Road tracks are not considered suitable).

2. MOTORS FOR ELECTRIC SCALE CARS:

All EC and GP events will clearly state which class of motors to be used.

2.1 "SPEC' CAR MOTOR:

Rebuildable, 17X2, fixed timing of 5 degrees, Bushes (No Bearings), Maximum wire thickness is. 0,71mm. All other dimensions see below and Appendix 10.

Armatures may be wound using the Mabuchi (star) or Sagami methods.

The armature stack must be solid with no cutouts, tri-rotors etc.

Armatures have to be either stamped with the wind by the manufacturer or can be 'tagged'.

Epoxy balancing of armatures for rebuildable standard or stock motors will not be permitted.

Tabs on the armature's commutator may only be "compression welded". No after-market welding, soldering or silver brazing will be permitted.

Brushes must be mounted in the 'upright' configuration (lay-down brushes will not be permitted).

No hybrid motors or mixing of parts from different models will be permitted.

No modifications to the physical construction of the motor can, end bell, or armature will be permitted (e.g. adding or removing material from the armature stack, relocating spring posts).

Any motor that shows any sign of tampering will be disqualified, the driver is responsible for any signs of tampering.

2.2 "MODIFIED CLASS" CAR MOTORS

a) Brushed Motor

Specifications '05' sized displacements:

Can:

Can diameter to be a maximum of 36.02 mm. Overall length to be a maximum of 53 mm measured from the mounting face of the motor to the furthest point not including solder, tabs or lead wires.

Current is supplied to the armature by 2 brushes.

Only Ceramic magnets are permitted. (Cobalt and rear earth magnets are not allowed)

Armature:

Shaft diameter is 3.175mm (0.125inches), production tolerances are allowed. The rotor shall have three poles with windings. Stack length 21.00mm minimum, 22.80mm maximum (both dimensions to be measured with Epoxy/Hysol insulation removed). No split rotor is allowed. The laminations have to be continuous without anything in between. The thickness of the stack plates is 0.35mm +/- 0.05mm. Only round copper wire is to be used for winding. The armature has to be permanently marked by the manufacturer, showing the number of windings and name of the manufacturer.

b) Brushless motor:

- a) Sensorless as well as sensed motors are allowed.
- b) The motor has to be rebuildable . Ball bearings are allowed.
- c) If the motor is sensed:

It must use a six position JST ZH connector model number ZHR-6 or equivalent connector with 6JST part number SZH-002T- P0.5 26-28 AWG contacts or equivalent.

Wire sequence must be as follows:

Pin #1 - Black wire ground potential

Pin #2- Orange wire phase C

Pin #3- White wire phase B

Pin #4 - Green wire Phase A

Pin #5- Blue wire temp control, 10K thermistor referenced to ground potential

Pin #6- Red wire +5.0 Volts DC +/-10%

Compatible speed control must use the 6 position JST header part number X-6B-ZR-SMX-TF (Where the X denotes the stile of header), or equivalent.

The power connector has to be clearly marked A, B, C:

A for phase A, B for phase B and C for phase C

d) "05" Size specifications

Can: Overall maximum diameter is 36,02mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires. Overall minimum diameter is 34,0mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires. Maximum length is 53,0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name. Minimum length is 50,0mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires.

Motor mounting holes must be on 1,00 inch (25.0 - 25.4mm) centres.

Stack/Rotor: If a stack is used the laminations have to be one after the other without anything in between. Stack minimum length 19,3mm, maximum 21,0mm. Stack inside diameter minimum 12,5mm, maximum 16,0mm. The thickness of the stack plates is 0,35+- 0,05mm. All laminations must be of the same material in a continuous stack.

Winding: Only three slot (phase) Y wound stators are permitted. No Delta wound stators allowed. Only circular (round) pure copper is permitted. There is no turn limit.

Rotor: Shaft diameter must be 0,125" (3,175mm). Only one piece, two poles banded Neodymium or Ferrite magnetic rotors are permitted. Magnet: Minimum length 23,0mm. Maximum 27,0mm. Magnet minimum diameter 12,0mm, maximum 15,5mm

d) All motors must have the original manufacturer's logo or name moulded into the end bell.

3. BATTERIES

3.1 Only NiCd or NiMH cells are approved. Cells are rated at 1.2 volts nominal. The size of the individual cell(s) to be: - Diameter 23.0mm +/-1mm, Overall length 43.0mm +/-1.5mm. Measurements include original manufacturers heat shrink. Overall length is the maximum length before attaching/soldering any link wires or battery bars.

3.2 1/10 scale Cars will be driven by a maximum of 6 cells at 7.2 volts nominal.

3.3 1/12th Cars racing modified motors will be driven by a maximum of 4 cells and 4.8 volts nominal

3.4 1/12th Cars racing spec motors will be driven by a maximum of 6 cells and 7.2 volts nominal.

3.5 Batteries may not be charged nor changed during a race

3.6 Additional batteries to power the radio equipment in the car are allowed.

3.7 Any new NiCd or NiMH must be commercially available for a reasonable time before it can be used in an EFRA event. Therefore any new cells have to be submitted to the EFRA Section Chairman. Rule takes its effect as from January the first 2006. Cells submitted or approved before that date keep their approval for their lifespan.

There are two submission periods during the calendar year to do so:

Till December 31 for use as from 1st of April.

Till June the 30th for use as from 1st of October *

*) Subject to the Chairman being satisfied that the new battery will be available.

Details of newly approved cells will be published on the EFRA websites as soon as available.

3.8 Only batteries appearing on the official EFRA websites will be legal for use in EFRA sanctioned meetings.

3.9 All previously approved batteries may be used for their lifetime or until their specifications no longer comply with the original one that was approved. It is the driver's responsibility to prove the legality of his cells in case of doubt

4. ELECTRONIC DRIVING AIDS

- 4.1 The radio control receiver in the car may operate steering and motor management. A separate battery supply for the powering of the timing equipment is allowed. Using the receiver to capture electrical signals from sensors carried in the car is prohibited, be it wireless or not.
- 4.2 Automated steering, gyroscopes to control car movement, traction control, active suspension are not allowed
- 4.3 The speed controller may have a device to limit the current/voltage passed from the batteries to the drive motor (e.g. timed delay, current limiter, keyboard programs) as well as a passive data recording device but setting or programming of these devices must only be possible whilst the car is stationary.
- 4.4 No other signals than these for the official lap counting transponder may be sent from the car.
- 4.5 Any competitor found in contravention of the spirit or fact will be disqualified from the meeting. The race organiser has the right to inspect any car, its components and transmitter at any time during the race event.

5. DRIVER PROCEDURE

- 5.1 Before your heat, if needed collect the auto timing equipment from dispatch and fix it to the car.
 - 5.1.1 When hand out auto-timing equipment is used, it is the driver's responsibility to fit it appropriately to the car and to remove it after timed heat if required.
- 5.2 When a personal transponder is used the driver is entirely responsible for the efficient functioning of the device.
- 5.3 As soon as race control allows, collect your transmitter, switch on and drive car to the start line. Minimum time between heats is two minutes.
- 5.4 When your heat has finished. Return transmitter, retrieve your car, switch off and bring it to scrutinizing with the handout auto timing equipment if required.
- 5.5 Marshal the heat following your own at the numbered position corresponding to your car number.
- 5.6 Collect your car from scrutinizing after marshalling.
- 5.7 The race director may demand the drivers to stand on the indicated positions on the rostrum.
- 5.8 The race director has absolute authority at the meeting but refer to your team manager if you encounter problems.
- 5.9 It is not allowed to leave the rostrum before the race is declared over by race control.

6. MARSHALLING

- 6.1 Only drivers may and must marshal the heat following their own. The drivers of the last heat will marshal the first heat.
- 6.2 A substitute marshal is only allowed if the driver is physically disabled and if approved by the Race Director.
- 6.3 Failure to marshal or provide an authorised substitute will result in the loss of best qualifying time if qualifying by fastest time is in operation or of the best points score if qualifying is by round by round.
- 6.4 It is the Team Manager's responsibility to ensure drivers marshal finals at EC's. Country allocations will be reduced pro-rata in case of non-compliance.
- 6.5 The organisation of drivers marshalling for the finals is the responsibility of the organiser.
- 6.6 The organiser must provide a marshal for any unfilled position. i.e. previous heat had less drivers or marshal missing.
- 6.7 All marshals must wear safe and sensible footwear that will not become detached when performing marshalling duties. (Sandal's are not acceptable).

7. EUROPEAN CHAMPIONSHIPS

- 7.1 European Championships will take place every year there is no World Championship in the concerned class held within Europe. However the general meeting can decide otherwise if deemed to be in the interest of the sport.

7.2 ALLOCATIONS

- 7.2.1 The country allocations for the EFRA European Championships will be established by the section meeting and published in the minutes.
- 7.2.2 Allocation and re-allocations are according to the general rules.
- 7.2.3 If available all countries receive re-allocated places in order of the allocation list, unless stated otherwise in this list. Any Federation requiring to be considered for re-allocations should put their request in writing to the Section Chairman no later than 1st January.
- 7.2.4 At least 100 entrants for 1/12 and 130 for the other classes (One may consider up to 150 participants if timetable and facilities i.e. driver tables etc, permit) are to be accepted for European

Championships and GP's.

7.2.5 For EC's one country's allotment is in no case to be higher than 33% of the total number of listed entries ("No-show" and last minute cancelling drivers are not to be considered).

7.2.6 a) The preceding year's European Champion will automatically be allocated a place from the EFRA allocation for the World Championships.

b) The reigning World Champion, if European, will automatically be allocated a place in the following two European Championships.

8. TIME TABLES:

8.1 The Race Organiser should schedule all events for each day to be completed and the track closed by 18.30 hours. It is recommended to end the last day early enough to allow participants to start their return journey.

8.1.1. 1/12th EUROPEAN CHAMPIONSHIP:

FRIDAY: Free practice and two organised practice rounds in the afternoon

SATURDAY: At least three rounds.

SUNDAY: At least one more round, organised practice in final-format and all finals.

8.1.2. 1/10th Touring EUROPEAN CHAMPIONSHIP:

THURSDAY: 09:00 Registration, Open and Timed Practice

FRIDAY 09:00 2 rounds of controlled Practice and 2 Qualifying Rounds

SATURDAY 09:00 3 Qualifying Rounds and Practice in Final Format

SUNDAY 09:00 second part practice in Final Format and Finals

8.1.3. 1/10 E off-road EUROPEAN CHAMPIONSHIP:

MONDAY: Free practice 2WD, Registration and Technical Inspection

TUESDAY: Controlled Practice and Qualifying Rounds 1-3

WEDNESDAY: Qualifying Rounds 4-5, Finals and Prize Ceremony

THURSDAY: Free practice 4WD, Registration and Technical Inspection

FRIDAY: Controlled Practice and Qualifying Rounds 1-3

SATURDAY: Qualifying Rounds 4-5, Finals and Prize Ceremony

The Race Organiser can change the above timetable providing he does so well in advance.

8.2 TIMETABLE FOR GRAND PRIX MEETINGS

8.2.1 The timetable for Grand Prix will be left to the discretion of the Organisers taking into consideration the number of competitors in each class. Organiser can determine the Timetable for all racing

9. RACING FORMAT EFRA EUROPEAN CHAMPIONSHIPS AND GRAND PRIX

9.1 PRACTICE

9.1.1 Free practice for E.C. events must be allowed as stated in the concerned timetable. No practice or racing is allowed on the track for 7 days preceding this (see also General rule 8.1.).

9.1.2 For 1/10 on road EC's: 2 series of organised practice with cars grouped in heats will be held with at least one using the official time-keeping system.

9.1.3 During controlled practice the driver must be present and his transmitter switched on for checking radio interference.

9.2 START PROCEDURE

9.2.1 There will be a minimum of seven (7) minutes between the starts of heats, (10) ten for 1/12th.

9.2.2 Verbal announcement will be given before the start of each heat and final as follows:

1 minute before the start: "One minute"

30 seconds before the start "30 seconds, Mechanics please leave the track"

15 seconds before the start: "Clear track": (Mechanics must have left the track)

10 seconds before the start "Ten seconds"

See 9.2.3 or 9.2.4:

9.2.3 **Qualifying heats:** the delayed start procedure (Staggered Start) will be used and a verbal start

signal, mentioning the car number, will be given for each car. Cars must start when directed by the race director. Cars not starting when directed may start after the last car has crossed the lap counting loop.

- 9.2.4 **Finals:** an audible signal generated by the timing equipment will be given after the “ten seconds” in a random delay of between 1 and 5 seconds.
- 9.2.5 After the 30 seconds signal cars not on the start line must be placed at the rear of the grid.
- 9.2.6 Jump-starts (after 10-second signal) -front wheels crossing start line or their marked startbox - 10-second penalty. Front wheels crossing the line or box by one-meter: 1 lap penalty. Jumpstarts are no reason for a re-start.

9.3 RESTART PROCEDURE

- 9.3.1 The Race Director or the Assistant Director, in absence of the race director, may order a restart.
- 9.3.2 In the event of an aborted start procedure; race must restart at least from the “30 seconds” before the start” announcement.
- 9.3.3 If the race is stopped before the first car has completed a full lap of the track then the race will be immediately re-started after the reason for the stoppage has been cleared. If the race is stopped after the first car has completed a full lap then the race will be re-run at a convenient time allowing for the recharging of batteries.

9.4 QUALIFYING

- 9.4.1 All qualifying Heats and Finals 1/10th will be 5 minutes and the last lap plus the time to complete this last lap up to a max of 40 seconds. For 1/12th the racing times will 8 minutes.
- 9.4.2 Qualifying will be by fastest time for 1/12th and “round by round” points system for 1/10th On and Off-road to cope with changing track and/or weather conditions.
If the ‘Round by Round’ qualifying method is used, the number of Rounds to count are as follows: - Six Rounds three to count, Five Rounds two to count, Four Rounds two to count, Three rounds two to count, Two Rounds one to count. Less than two Rounds completed event null and void.
If the intended maximum number of Rounds cannot be completed, due to weather or unforeseen circumstances, the number of Rounds to count will follow the same format. Qualifying Round has to be completed for any heats of that Round to be counted.
Highest qualifying position in each round will score zero (0) points, second place 2 points, third place 3 points, fourth place 4 points and so on. All other qualifying round scores will be discarded. In every round, in the event of a tie the points will be equally awarded to each driver and the first next driver not tying will get one point less.
- 9.4.3 In the event of a tied position the driver with the single highest finishing position in either of the best two rounds that counted will be awarded the tie. In the event of a continuing tie then the laps and times from the best result in points will be compared. The driver with the fastest laps and time will be awarded the tie. In the case of a continuing tie, then the times from the second best scores will be compared.
- 9.4.4 When a driver incurs a penalty which results in his time and therefore points in any Round being disallowed, then all drivers below the disallowed position will move up one place. (In the event the penalised driver is a tie on obtained points the one with the best time will be lost).
- 9.4.5 The qualifying heats will be a maximum of 10 drivers and where possible equal number of drivers in each.
- 9.4.6 Cars will start in one line across the track in staggered start mode for the qualifying heats.
- 9.4.7 During the first round of qualifying, heat-starting order can be determined by lottery, or by the driver's performance in controlled practice based on his 2 best consecutive laps during the last round of controlled practice. During further rounds, heat-starting order will be by the overall fastest time of drivers in their heat. This will apply whether the Fastest Time Qualifying System or Round by Round System is used.
- 9.4.8 In order to give drivers an equal chance during qualification, organiser may re-seed these drivers that are obviously way above or under the average in their group into a more suitable heat whenever possible.
- 9.4.9 Off road heats will be run in the following sequence for the 5 qualifying rounds:
Round 1: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Round 2: 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 1, 2, 3
Round 3: 7, 8, 9, 10, 11, 12, 13, 1, 2, 3, 4, 5, 6
Round 4: 10, 11, 12, 13, 1, 2, 3, 4, 5, 6, 7, 8, 9
Round 5: 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1.
On road heats will always be run from 1 to 15.
- 9.4.10 If the number of heats differs from 12, or if the event is planned with more/less rounds, a sequence

following this general scheme has to be used.

- 9.4.11 The qualifying results will determine the composition of all finals with the top 10 proceeding to the "A" final and so on down.
- 9.4.12 Off road: One round of controlled practice using the official time keeping will be organized for the A finalists. On road: A controlled practice will be applicable to all finals.
- 9.4.13 Qualifying results will be published after each round

10 FINALS

- 10.1 There will be 10 drivers in all finals where possible at. All drivers will take part in a final.
- 10.2 The winner determined from the combined A finals will be the champion. If the A finals cannot be completed, the awards will be made on the best qualifying positions.
- 10.3 Off road: Each time (race) of the main "A" final will be considered a separate race. The finals will be run from slow to fast with the 3 legs of the "A" final in between.
On road: All finals will be run in 3 legs from slow to fast
- 10.4 The best 2 out of 3 to count.
- 10.5 The winner of a final gets 1 point; the second gets 2 points and so on up to 10 points for the 10th driver.
- 10.6 In the event of a tied position the driver with the single highest finishing position in either of the best 2 finals that counted will be awarded the tie. In the event of a continuing tie then the laps and times from the highest finishing position will be compared. The driver with the fastest laps and time total will be awarded the tie. In the case of a continuing tie, then the times from the second best position will be compared.
- 10.7 Cars, which do not pass the start/finish line after the prescribed race time, will be classified according to the number of laps recorded. The "A" finalist with the lowest number of points will be the European Champion or the winner of the grand prix.
- 10.8 All final results will be published at least 10 minutes before prize giving.
- 10.9 There will be awards at least for all "A" finalists, and the winners of any other final. If no round of Final(s) are completed the results of the event are taken on qualifying positions.

11. TECHNICAL INSPECTION

- 11.1 All cars may be called for technical inspection at any time but must always be presented for scrutinising immediately after completing their heat, qualification or final.
- 11.2 Failure to meet the technical rules will result in loss of the concerned heat result.
- 11.3 Non-compliance obviously resulting from race incidents will not be accounted for at scrutinising
- 11.4 After "A" finals the cars must be collected and impounded by organiser's staff ("park fermé").
- 11.5 The motors of the top 3 finishers may be dismantled in order to check their conformity with the rules.
- 11.6 It is allowed to change the chassis of the car, providing the replacement is of the same design, specifications and material as the original item that was registered prior to the start of racing. The new chassis has to be registered and presented to the authority

12. GENERAL REQUIREMENTS FOR COMPETITION CARS IN ELECTRIC CLASSES

- 12.1 Cars must be realistic and when initially entered in the meeting have neatly finished and complete body shells.
- 12.2 Open cockpit cars must have a realistic driver figure fitted in an appropriate position at all times when racing. This consists of at least a driver's head/helmet, shoulders and arms and should be painted in a realistic appearance, colour and garb.
- 12.3 The body and chassis must be securely joined at all times when the car is on the track. Driving on the track without body is not to be allowed at any time.
- 12.4 All cars shall have identifying numbers in at least three positions, right, left and on front of the car.
- 12.5 No car shall be constructed so as to be dangerous or damage the track surface or other competitor's cars.
- 12.6 The cars must allow fitting a time keeping transponder in a suitable position with the correct orientation.
- 12.7 Any type of speed controller, not causing interference's of any kind to lapcount, computers, transmitters etc., may be used, but it must be contained within the car and not protrude through the body shell.
- 12.8 All cars must have a transparent windscreen. Open or painted windscreens are not allowed except for models of prototypes that did not have windscreens.
- 12.9 Side or rear windows must be clear. The driver may have his name on the side window in the same scale as the car.

- 12.10 Openings in the body must be appropriate to the full size prototype (Scoops, vents etc.).
- 12.11 Wheel arches must be cut out if the prototype ran that way.
- 12.12 Tyres must be black except sidewall detailing.
- 12.13 Openings for wing mount or antenna shall provide no more than 10 mm clearance.
- 12.14 Definition of a wing: A wing is an additional item attached to the car.
- 12.15 Definition of a Spoiler: A spoiler is that which is moulded in the body.
- 12.16 Spoiler and side dam dimensions include that which is moulded into the body.
- 12.17 Bumpers are not required. If fitted, bumpers must be constructed so as to minimise injury that may result from being hit by a car. The overall width may not exceed the overall width of the front of the car, including wheels.
- 12.18 Wire bumpers shall be made of wire between 2.5 mm and 4 mm in diameter.
Bumpers made from sheet type material shall be between 2.5 mm and 6.5 mm thick, with all exposed edges smooth and well rounded. Closed cell foam (i.e. PU-RIM) bumpers may be 2cm thick
Rigid blade-like bumpers made of hard, non-resilient material such as metal, brittle plastic, plywood, masonite etc., are not allowed.
- 12.20 All weight minima are applicable to cars equipped with fixed personal transponder as well as for those using (hand-out) auto-powered transponders. The later are to match the minima without this transponder.

REQUIREMENTS FOR ELECTRIC ON ROAD CLASSES

1.GENERALITIES

- 1.1 On carpet tracks a minimum ground clearance of 3 mm for 1/12th and 5mm for 1/10th is mandatory at the start of each heat and final.

2.BODIES:

- 2.1 Any newly homologated bodies must have the part number moulded into the front windscreen.
- 2.2 Body cannot be trimmed higher than lower body trim lines.
- 2.3 No portion of chassis, wheels and tyres, or equipment may extend beyond body except to the rear. (Exception -Formula car suspension chassis and abbreviated bodies with no engine cover).
- 2.4 Wheel nuts and/or axles must not protrude more than 1.5 mm beyond the wheels
- 2.5 No more than 1.5 mm of wheel outside diameter may be exposed on the outside of the wheel (i.e. not covered by the tyre). If wheel discs are used they should be secured by a screw or clip.
- 2.6 In all classes where possible, an 8th scale number must in addition be placed on the roof of the body (NASCAR style) for absolute best identification. Numbers on front windscreens must be avoided
- 2.7 The organizers will supply the numbers.

3. ROLL-OVER MASTS:

- 3.1 A rollover mast may be fitted. If so, it must have a blunt end for safety reasons, terminate in a closed loop at least 4.75 mm O.D. or a ball or button not less than 8 mm in diameter.
- 3.2 If a rollover mast and radio antenna is fitted, the antenna must be part of the mast along its length. Max. Height from ground 35 cm.

4. BUMPERS

- 4.1 All cars may run a rear bumper, which must be behind rear tyres.
- 4.2 If used, front bumpers must be flat; parallel to the ground in all directions.

5. TYRE ADDITIVES / TRACTION IMPROVING TREATMENTS:

- 5.1 All Tyre treatments, governed by health, nuisance and track damage considerations will be at the discretion of the organisers and EFRA. I.e. Normally only odourless tyre cleaners or traction additives will be allowed.
- 5.2 Generally allowable products for carpets are: Corally TC2 (Jack the gripper), LRP Top grip carpet, Orion Foam TQ. and CS Grip tyre conditioner.
For Tarmac use: Orion street juice, Jack the Gripper, Trinity Tyre Tweak, GM X grip 3, LRP top grip Asphalt.
- 5.3 Any other product can be added to the list by request and once checked by section chairman and organiser as being ok.

- 5.4 European Championships: A list of allowed substances or products will be published with the entry form.

2. PARTICULAR TO 1/12th SPORTS CARS

2.1 BODIES:

- 2.1.1 The body must be a 1/12th replica of an actual racing car in all areas: GTP/GROUP C/World Sports Cars (WSC)/ GT racing classes 1 A, 2 (GT1 & GT2)) and Le Mans Prototype (LMP) bodies only will be allowed. A list of allowed bodies must be sent with the drivers package and to the organisers and be available on the EFRA websites.
- 2.1.2 Wheel cut-outs may not be more than 15 mm larger than tyre radius (Exception - scale size and/or shape wheel cut-outs). Wheel wells must be cut out if those on the original car were cut out.
- 2.1.3 Only one wing is allowed on the car unless the actual car had a second wing. The second wing must be scale within 10% in size and location. The wing may be not closer than 6.5 mm to any part of the body other than the tail fins or side dams.

2.2 MEASUREMENTS AND WEIGHTS

Maximum overall width of the car: 172 mm
Minimum weight: 800 gram for 4 cell and 890gram for 6 cells.
Wing: Maximum width: 172 mm, the wing profile has to fit in a rectangle of 52mm (height) x 26mm
Dams: Maximum dam length: 102 mm, max. height 25 mm. These dimensions include molded-in portions of body.
Spoilers: Max. Spoiler height: 25 mm, max length 35 mm. These dimensions include the molded in portions of the body, the use of a gurney flap to extend the wing length is acceptable.
Bumper: May extend 6.5 mm beyond side of body or to 172 mm whichever is less. May extend 13 mm forward of body, but in same shape as body.
Wheel rim diameter: Minimum 29 mm and Maximum 40 mm. (Including all non-rubber parts of the wheel and tyre).

2.3 TYRES

- 2.3.1 All tyre sizes apply at the start of the race
- 2.3.2 Tyres Minimum width 13 mm. Maximum width 38 mm. The tyre width is measured at the widest part of the tread or sidewall.
- 2.3.3 Any tyre diameters will be allowed. The diameter must be maintained over at least the minimum width of the tyre.
- 2.3.4 Each tyre on the car must only be constructed from 1 compound (shore rating / density) of foam rubber.
- 2.3.5 Tyres must not be wet or greasy from additive at the start of a heat or final.
- 2.3.6 Technical Inspection can demand to check the tyres prior to each start

3. PARTICULAR TO 1:10 ELECTRIC SALOON CARS

3.1 BODIES:

- 3.1.1 Only replicas of real touring cars that have a minimum length of 4200mm in the original car are allowed. No GT or Sports car bodies allowed. All Touring car bodysHELLS to be submitted to the EFRA BodysHELL Homologation Officer for approval.
- 3.1.2 Bodies are not to be cut above the bottom line of the rear bumper.
- 3.1.3 A wing may be fitted to the rear of the body but not on the roof or above the roofline.
- 3.1.4 The wing may overhang the rear of the body of the car by 10 mm.
- 3.1.5

3.2 MEASUREMENTS AND WEIGHTS

Maximum overall width (with body) 200 mm
Maximum overall width (without body) 190 mm
Minimum height (to top of the roof) 115 mm (ready to run)
Maximum wheelbase 270 mm
Minimum weight 1500 gram
Wing: maximum width 190 mm. The wing profile has to fit in a rectangle of 25mm (height) x 40
Maximum wheel rim diameter (excl. ribs) 50 mm

The use of multiple-speed transmissions (gearboxes) and slipper clutches is not allowed. All cars must have independent suspension operating on all four wheels (no PRO 10 cars allowed). Only a fixed single ratio transmission is allowed and it may not include a mechanical device/s between the drive motor output and the gearbox input for the purposes of controlling torque (e.g. slipper clutches).

3.3 TYRES

3.3.1. Only moulded tyres are allowed (no sponge tyres).

Maximum tyre width 26 mm

Minimum tyre width 18 mm

3.3.2. At EC's it is only allowed to use the tyres that were agreed by the section meeting at the EFRA AGM together with the race organiser (race organiser will make their recommendation). For dry weather racing there will be a single control slick tyre with insert and will come pre-glued to the wheel (insert, tyre and wheel to be the same for all drivers) and commercially available via model/hobby shops. For use at the EC, the tyres must be bought from the organiser.

3.3.3. 3 sets of 2 tyres are allowed for qualifying, and 3 sets of 2 tyres are allowed for finals.

3.3.4. Tyres from qualifying may be used in the finals

3.3.5. ~~Only three sets of 4 tyres per driver are allowed for both qualifying and finals. Tyres from qualifying may be used in the finals.~~

3.3.6. For wet/damp conditions a treaded tyre may be used but only when the Race Director gives his permission. This treaded wet tyre does not form part of the limited number of sets.

3.3.7. Tyres/wheels may not be modified. Changing of tires between drivers is not allowed. Drivers must have their wheels and tyres marked by Technical Inspection and this marking can be done at any time.

3.3.8. The Technical Inspector must mark wheels/tyres before being presented to Technical Inspection for qualifying heats and finals.

3.3.9. Unmarked wheels/tyres may not be used on the car during qualifying heats and finals but are allowed for practice.

3.3.10. Technical Inspection shall be responsible for recording the number of tyres used by each driver.

3.3.11. No extra sets are allowed for a re-run of a heat..

PARTICULARS For 1/10 OFF ROAD

1. GENERALITIES:

1.1 Cars entered for off-road competitions should be reasonable representations of the style of full size cars generally accepted as being suitable for rally-cross, rallying or desert racing.

1.2 There are two classes of cars: 2WD and 4WD. Both must be run and drivers are allowed to enter both classes.

1.3 All open gears must be enclosed or protected so as to prevent injuries.

1.4 Any modification to the car is allowed.

1.5 A differential may include a mechanism for apportioning torque over the axle/s (e.g. limited slip differential). This mechanism must only be capable of adjustment manually whilst the car is stationary

2. MEASUREMENTS AND WEIGHTS:

Maximum overall length: 460 mm

Maximum overall width: 250 mm

Maximum overall height: 200 mm (to be measured with the suspension fully compressed)

Minimum weight 2WD cars: 1.474 gram

Minimum weight 4WD cars: 1.588 gram

Maximum size of rear wing: 220mm wide, the wing profile has to fit in a 80mm x 80mm rectangle

Maximum overall diameter of wheel & tyre: 90mm

3. TYRES

3.1 Grand Prix: Any combination of commercially available 1/10th scale wheels and tyres may be used.

3.2 European Championships: The organiser will propose a 2 types of tyre for the 2wd rear axle and the 4wd rear axle. The manufacturer and full description of the tyres chosen must be given but there remains free choice of compound. The proposed tyre choice will be ratified at the EFRA section

AGM prior to the EC and provided always that the chosen tyres are commercially available throughout the EFRA nations).

- 3.3 No metal or hard plastic may be used for spikes
- 3.4 Modifications to tyre construction and tread patterns are allowed. 'Cut and Shut' is permitted at Grand Prix only and even so if the parts of one or more different tyres are glued together, provided always that the constituent parts are all recognisable as coming from commercially available 1/10th scale tyres.
- 3.5 No sponge or foam tyres are allowed except for foam inserts completely enclosed within the sidewalls.
- 3.6 No tyre additives other than water are allowed, inside or outside of any tyre.

4. RAIN PROCEDURE for QUALIFYING

- 4.1 The Race Director and the Referees are jointly responsible for the decision to stop racing in the event of adverse weather conditions.
- 4.2 When Racing is suspended as per the rule above, then racing will recommence, when weather permits, with the heat that was next to be run prior to the interruption.
- 4.3 Every effort should be made by the Race Directors to make necessary repairs to the racing surface prior to commencement of racing.

Proposed (1) by EFRA executive,

Seconded by: SPAIN

Amended by all attending countries and approved

Approved With 1 Abstention

Proposals Electric OFF-ROAD

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

4.3 (e) All Finals will use a "F1" type grid start. Cars to be placed at **2.0 meter** intervals with two rows of cars. Cars must be placed forward facing at 90 degrees to their marker line or start box. After the 10 seconds signal, cars on the start line must be placed at the rear of the grid.

Remark

The existing rule states that the distance between cars on the start grid for Finals is 1.5 meters. 2.0-meter intervals will give a greater distance between cars, which should result in less conflict.

Proposed (1) by BRCA GB

Seconded by: **France** **Approved** **with 1 Abstention** **item in the rules**

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

5.2. (a)

Existing rule states :-

Only Sub-C sized NiCads or NiMH are approved. The size of the individual cells rated at 1.2 volts nominal is 23mm diameter, 43mm length plus manufacturers tolerance.

Amend to :-

Only NiCd or NiMH cells are approved. Cells are rated at 1.2 volts nominal.

The size of the individual cell(s) to be :- Diameter 23.0mm +0/-1

Overall length 43.0mm +0/-1.5

Measurements include original manufacturers heatshrink. Overall length is the maximum length before attaching/soldering any link wires or battery bars.

Remark

There has been much confusion regarding the allowed size of cells Internationally.

The above sizes are taken from **61951-2 IEC: 2003**

This specification is well known to the major cell suppliers.

There is no point in detailing measurements without heat shrink, as cells cannot be measured in that state as we require the heat shrink to be fitted for identification purposes.

The above spec. refers to dimensions and tolerances for 'jacketed cells'

Proposed (1) by BRCA GB

Seconded by:

Amended: validation date 01Jan2006 **SECONDED** by Denmark and approved unanimous
TEXT refreshed rules is updated accordingly

5.4 (a) Second paragraph. Existing rule states :-

Shaft diameter is 3.175mm (0.125inches), production tolerances are allowed. The rotor shall have three poles with windings. Stack minimum length 21.0mm, maximum 22.8mm (without Epoxy). No split rotor is allowed. The laminations have to be one after the other without anything in between. The thickness of the stack plates is 0.35mm +/- 0.05mm, a maximum of 63 laminations have to be used. The minimum stack thickness is 3.5mm. Only copper wire is to be used for winding. A minimum of 10 continuous windings per. Wire and pole is allowed (to be checked by an inductance test). The number of windings for each is defined in the table. The armature has to be permanently marked showing the number of windings and name of the manufacturer.

Amend to: -

Shaft diameter is 3.175mm (0.125inches), production tolerances are allowed. The rotor shall have three poles with windings. **Stack length 21.00mm minimum, 22.80mm maximum (both dimensions to be measured with Epoxy/Hysol insulation removed)**. No split rotor is allowed. The laminations have to be **continuous** without anything in between. The thickness of the stack plates is 0.35mm +/- 0.05mm. Only **round** copper wire is to be used for winding. The armature has to be permanently marked **by the manufacturer**, showing the number of windings and name of the manufacturer.

Remark

The length of stack needs clarifying that both dimensions are taken without Epoxy insulation, and two decimal places have been added to the dimensions to indicate accuracy required.

The requirement of a maximum of 63 laminations has been deleted. The mathematics are confusing. The max. & min. length is stated along with the laminate thickness and tolerance. Therefore the number of laminations should not be needed. In fact, if the steel sheet was below nominal thickness by 0.02mm (with a tolerance of 0.05mm allowed), the armature assembly would be out of tolerance even with 63 laminates.

The minimum stack thickness of 3.5mm has been deleted. It cannot be checked without destroying the armature, so the rule cannot be policed.

“Round” section copper wire has been added to prevent special wire being used that is not available to all parties.

Marking by “the manufacturer” has been added to ensure the make of armature is correct.

The limit of 10 turns has been deleted, as this will no longer apply in 2006.

Proposed (1) by BRCA GB

Seconded by: France Approved with two abstentions TEXT refreshed rules is updated accordingly

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

4.7 MARSHALLING

4.7 (f)

All marshals must wear safe and sensible footwear that will not become detached when performing marshalling duties. (Sandal's are not acceptable).

Remark *In order to get the sense of the proposal please add a small remark*

Rule should be formalised for safety reasons, and to ensure that footwear does not become detached and impede competing cars.

Proposed (1) by BRCA

Seconded by: Holland

Amended approved unanimously TEXT refreshed rules is updated accordingly

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

e) shall be amended as follow

Approval of batteries, se Appendix 3 rule 8.1

Remark

Suggestion is to have all text about batteries together. There is no need to have extra test for off-road batteries.

Proposed (1) by SBF Sweden Withdrawn by Sweden

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

2.6.1. TIMETABLE FOR EUROPEAN CHAMPIONSHIP

.....		
TUESDAY	>	MONDAY
WEDNESDAY	>	TUESDAY
THURSDAY	>	WEDNESDAY
FRIDAY	>	THURSDAY
SATURDAY	>	FRIDAY
SUNDAY	>	SATURDAY

Remark

The beginning EURO's on **Monday** is better than the beginning on Tuesday, since for the journey sufficient time and for the return journey is available a whole day is won. With EURO's the 2005 in France has itself this schedule in the best way worked.

Proposed (1) by OFMAV AUSTRIA

Withdrawn by Austria

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

2.3. Practice

- a) Free practice for E.C. events must be allowed **MONDAY** for 2WD and **THURSDAY** for 4WD preceding the race. No practice or racing is allowed on the track for 7 days preceding this (see also General rule 8.1.).

Remark

The beginning EURO's on **Monday** is better than the beginning on Tuesday, since for the journey sufficient time and for the return journey is available a whole day is won. With EURO's the 2005 in France has itself this schedule in the best way worked.

Proposed (1) by OFMAV AUSTRIA

Withdrawn By Austria

Page 122 5.1 h)

For Grand prix meetings any combination of commercially available 1/10th scale wheels and tyres may be used.

For EC meetings the organiser will propose 2 types of tyre for the 2wd rear axle and the 4wd rear axle. The manufacturer and full description of the tyres chosen must be given but there remains free choice of compound. The proposed tyre choice will be ratified at the Efra section AGM prior to the EC and provided always that the chosen tyre are commercially available throughout the Efra nations.

Proposal:

For Grand prix meetings any combination of commercially available 1/10th scale wheels and tyres may be used.

For EC meetings the organiser will propose 2 types of tyre for the 2wd rear axle and the 4wd rear axle. The manufacturer and full description of the tyres chosen must be given but there remains free choice of compound. The proposed tyre choice will be ratified at the Efra section AGM prior to the EC and provided always that the chosen tyre are commercially available throughout the Efra nations

In 2wd only 3 sets of rear tyres are allowed for use in qualifying and finals for all competitors. The A-finalist get 1 additional set of rear tyres.

In 4wd only 3 sets of front and rear tyres are allowed for use in qualifying and finals for all competitors. The A finalist get 1 additional set of front and rear tyres.

Proposed (1) by NOMAC HOLLAND

Seconded by: Belgium

Defeated

Page 124 5.4 Modified class car motors:

delete 5.4 a)

for: **Brushed Motors**

5.4

Motors need to be commercial available at all time and meet all technical specifications as mentioned in 9.2

5.4.1

Can diameter: max 36.00mm including endbell.

Can length: max 57.00mm including endbell. Ball bearings only.

Magnets: size and material free. Only 2 magnets allowed with one pole per magnet.

Armature: 3 segment armature only. Stack length 21.00mm min - 25.00mm max (including hysol/armature insulation). Outside diameter max 23.0 mm. Min 60 – max 70 silicon steel laminations of 0.35mm.

Production tolerance of 0.025mm allowed. Laminations need to follow up without anything in between. Stack size 4.5mm (5mm with hysol). Spalt size min 4.00mm - max 4.15mm. Axle parallel aligned spalt only.

Commutator: Pure copper only. Min copper size 6.8mm, max 9.0 mm. 3 segments only, one per pole.

Shaft: diameter .125 inch, stainless steel only.

Wire: only pure copper circular round wire allowed.

Brushes: 2 maximum, with a maximum circular (diameter) size of 5mm. Current to commutator supplied by brush only. Brush conductive material only to contain copper, and/or silver and carbon.

Anything to increase long live stability like epoxying, cutting comm, add cooling fans/parts, balancing armature, commutator protectors, etc is allowed.

New motors need to be commercially available at the event, 100 pcs minimum.

5.4

b) General Definition of a brushless Motor etc

addition: : Delta wound stators allowed

Proposed (1) by NOMAC HOLLAND

Withdrawn by NOMAC

Proposals Electric Track

12.1 BODIES: A technical advisory workgroup of both the trade and the hobby has been launched to come forward with a set of rules that will be introduced under new EFRA regulation and homologation.

As soon as the group comes to a head of agreement it will be introduced by postal means.

Proposed (1) by: EFRA executive

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

Only Sub-C tolerance. Any new cells have to be submitted to the EFRA Section Chairman by the 31 st of December and the 30 th of June each year. Subject toavailable, they will be included on the EFRA list from 11 st of February and the 1st of August.

Rest of the rule is deleted.

Remark *In order to get the sense of the proposal please add a small remark*

IFMAR and ROAR have already approved new batteries.

Proposed (1) by SFB SWEDEN

Seconded by: Belgium

Amended and approved, text updated

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

2.1 Races

All heats and finals will be 1/12th- 8minutes, 1/10th – 7 minutes, plus....

Remark *In order to get the sense of the proposal please add a small remark*

We are driving 5-minutes heats since we had batteries capable of 1200mAh. Now we have trice the capacity, but still the same heat length. In order to get motor temperatures and tire wear down, and fun up, we have to increase the driving-time.

I'm aware that this will have effects on the timetable, so please see necessary amendments in this respect (for instance only 5 qualifying heats), as a part of this proposal.

Proposed (1) by OFMAV AUSTRIA

Seconded by: Switzerland

Defeated 3 for 8 against

General definition of a Brushless Motor:

- a) Sensored or sensorless motors are allowed.
- b) The motor has to be rebuildable. Ball bearings are allowed.
- c) If the motor is sensored:
 - It must use a six position JST ZH connector model number ZHR-6 or equivalent connector with 6 JST part number SZH-002T-P0.5 26-28 awg contacts or equivalent.

Wire sequence must be as follows:

Pin #1 - Black wire ground potential

Pin #2 - orange wire phase C

Pin #3 - white wire phase B

Pin #4 - green wire phase A

Pin #5 - blue wire temp control, 10 k Thermistor referenced to ground potential

Pin #6 - red wire + 5.0 volts d.c. +/- 10%.

Compatible speed control must use the 6 position JST header part number X-6B-ZR-SMX-TF (where the X denotes the style of the header), or equivalent.

- The power connector has to be clearly marked A, B, C.

A for phase A

B for phase B

C for phase C

d) `05` size specifications

Can:

Overall maximum diameter is 36.02mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires.

Overall minimum diameter is 34.0mm measured at whatever point yields the minimum dimension, excluding solder tabs or wires (**but can consist of cooling fins**).

Maximum length is 53.0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name.

Minimum length is 50.0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name.

Motor mounting holes must be on **25mm to 1.00-** inch (25.4mm) centres.

Stack/Stator: **~~If a stack is used then it must be continuous~~**

Stack minimum length 19.3 mm, maximum **25.0** mm.

Stack inside diameter for slotted stacks minimum 12.5mm, maximum 16.0 mm.

Stack inside diameter for spotless stacks minimum 19,0mm, maximum 22,0mm.

The stack must be continuous. The lamination have to be one after the other without anything in between. The thickness of the stack plates is 0.35 +- 0,05 mm. All laminations must be of the same material.

Winding:

Only three phase "Y" **and delta** wound motors allowed. Only circular (round) pure copper wire permitted. No turn limit.

Rotor:

Shaft diameter must be 0.125" (3.175mm). Only one piece, two pole Neodymium or Ferrite magnetic rotors are permitted. Magnet minimum length 23.0 mm, maximum 27.0 mm. Magnet minimum diameter 12.0mm, maximum 15.5mm.

d) All motors must have the original manufacturer's logo or name moulded into the end bell.

Remark In order to get the sense of the proposal please add a small remark

Reasons for the rule change:

- Clarify the rule, The current rule is technical undefined in some points.
- Standard hole distance of Sagami and 540 motors is 25mm, not 25,4mm
- Stack length must be same as magnet length for good efficiency of the motor. Otherwise the motors can overheat.
- With the current rule the brushless motors can not compete with the (unlimited) brushed motors
- New rules prevent protests, no new development for new rules needed, because same parts can be used.
- Delta winding makes more sense, because brushed motors are also delta wound and no star point soldering is needed. No new development needed. Cheeper production. Star solder point can break at heat.

Proposed (1) by OFMAV AUSTRIA TO be forwarded to taskforce

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

...

~~maximum Chord 40mm~~

~~maximum width 190mm~~

~~Wing endplates maximum 40x25mm~~

The wing has to fit into a horizontally oriented box of 40mm depth, 25mm height and 190mm width.

Remark *In order to get the sense of the proposal please add a small remark*

Just clarify this rule, and adapt it to common use (at least at some EC's)

Proposed (1) by OFMAV AUSTRIA Withdrawn by Austria

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

At EC's..... their recommendation). **Different Tyres can be approved for Outdoor and Indoor. At GP the country desired what type of tyres to be used.**

For dry... .. are allowed.

Remark *In order to get the sense of the proposal please add a small remark*

This rule is only actual if different surfaces are approved.

Proposed (1) by SWEDEN Not Seconded

General definition of a Brushless Motor:

- a) Sensored or sensorless motors are allowed.
- b) The motor has to be rebuildable. Ball bearings are allowed.
- c) If the motor is sensored:
 - It must use a six position JST ZH connector model number ZHR-6 or equivalent connector with 6 JST part number SZH-002T-P0.5 26-28 awg contacts or equivalent.

Wire sequence must be as follows:

Pin #1 - Black wire ground potential

Pin #2 - orange wire phase C

Pin #3 - white wire phase B

Pin #4 - green wire phase A

Pin #5 - blue wire temp control, 10 k Thermistor referenced to ground potential

Pin #6 - red wire + 5.0 volts d.c. +/- 10%.

Compatible speed control must use the 6 position JST header part number X-6B-ZR-SMX-TF (where the X denotes the style of the header), or equivalent.

- The power connector has to be clearly marked A, B, C.

A for phase A

B for phase B

C for phase C

d) `05` size specifications

Can:

Overall maximum diameter is 36.02mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires. Maximum length is 53.0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name. Minimum length is 50.0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name. Motor mounting holes must be on 25mm to 1.00- inch (25.4mm) centres.

Stack/Stator:

Stack minimum length 19.3 mm, maximum 25.0 mm.

Stack inside diameter for slotted stacks minimum 12.5mm, maximum 16.0 mm.

Stack inside diameter for slottless stacks minimum 19,0mm, maximum 22,0mm.

The stack must be continuous. The lamination have to be one after the other without anything in between. The thickness of the stack plates is 0.35 +- 0,05 mm. All laminations must be of the same material.

Winding:

Only three phase "Y" and delta wound motors allowed. Only circular (round) pure copper wire permitted. No turn limit.

Rotor:

Shaft diameter must be 0.125" (3.175mm). Only one piece, two pole Neodymium or Ferrite magnetic rotors are permitted. Magnet minimum length 23.0 mm, maximum 27.0 mm. Magnet minimum diameter 12.0mm, maximum 15.5mm.

d) All motors must have the original manufacturer's logo or name moulded into the end bell.

Remark

Reasons for the rule change:

- unclear definition of the actual rule, The rule is technical completely wrong in some points.
- Standard hole distance of Sagami and 540 motors is 25mm, not 25,4mm
- Stack length must be same as magnet length for good efficiency of the motor. Otherwise the motors can overheat.
- With the current rule the brushless motors can not compete with the brushed motors
- Only the overheating Novak/Reedy motor system is allowed at the moment.
- New rules prevent protests, no new development for new rules needed, because same parts can be used.
- Delta winding makes more sense, because brushed motors are also delta wound and no star point soldering is needed. No new development needed. Cheeper production. Star solder point can break at heat.

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

General definition of a Brushless Motor:

a) Sensored or sensorless motors are allowed.

b) The motor has to be rebuildable. Ball bearings are allowed.

c) If the motor is sensored:

- It must use a six position JST ZH connector model number ZHR-6 or equivalent connector with 6 JST part number SZH-002T-P0.5 26-28 awg contacts or equivalent.

Wire sequence must be as follows:

Pin #1 - Black wire ground potential

Pin #2 - orange wire phase C

Pin #3 - white wire phase B

Pin #4 - green wire phase A

Pin #5 - blue wire temp control, 10 k Thermistor referenced to ground potential

Pin #6 - red wire + 5.0 volts d.c. +/- 10%.

Compatible speed control must use the 6 position JST header part number X-6B-ZR-SMX-TF (where the X denotes the style of the header), or equivalent.

- The power connector has to be clearly marked A, B, C.

A for phase A

B for phase B

C for phase C

d) `05` size specifications

Can:

Overall maximum diameter is 36.02mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires. Maximum length is 53.0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name. Minimum length is 50.0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name. Motor mounting holes must be on 25mm to 1.00- inch (25.4mm) centres.

Stack/Stator:

Stack minimum length 19.3 mm, maximum 25.0 mm.

Stack inside diameter for slotted stacks minimum 12.5mm, maximum 16.0 mm.

Stack inside diameter for slottless stacks minimum 19,0mm, maximum 22,0mm.

The stack must be continuous. The lamination have to be one after the other without anything in between. The thickness of the stack plates is 0.35 +/- 0,05 mm. All laminations must be of the same material.

Winding:

Only three phase "Y" and delta wound motors allowed. Only circular (round) pure copper wire permitted. No turn limit.

Rotor:

Shaft diameter must be 0.125" (3.175mm). Only one piece, two pole Neodymium or Ferrite magnetic rotors are permitted. Magnet minimum length 23.0 mm, maximum 27.0 mm. Magnet minimum diameter 12.0mm, maximum 15.5mm.

d) All motors must have the original manufacturer's logo or name moulded into the end bell.

-

Proposed (1) by DMC GERMANY to be forwarded to task group

page 104

1.6

EC will take place every year there is no 1/10th WC in Europe alternating with the WC (this starts from 1997 so no EC will take place in 1998)

Proposal: delete rule

Proposed (1) by NOMAC Holland

Withdrawn by Holland

page 106

2.5 d)

The motors of the top 3 finishers may be dismantled to check their conformity with the rules

P roposal:

the motors of the top 3 finishers will be dismantled after each A final to check their conformity with the rules.

Motors will be marked and removed from the modelcar at the technical inspection. The competitor can take his car for preparation.

Proposed (1) by NOMAC HOLLAND

Withdrawn by Holland

Page 110

8. Batteries

proposal:

Delete and Replace rules 8.1, 8.2 a, b and c, 8.3 and 8.4

8.1

Batteries need to be submitted to IFMAR before Dec 31st. Batteries are approved from Jan 1st if it meets all required specifications as mentioned in section 4.3.4. Submittal approval will be for 1 (one) year. The official battery approval list has to be shown on IFMAR website no later than Feb 1st.

8.2

A minimum of 50000 pieces of any battery needs to be produced and available at distributors **worldwide** before January 1st. Previously homologated batteries (before the year 2006 only) are automatically allowed and do not need to be submitted.

8.3

If the batteries meets all specifications it will be automatically homologated without voting of the blocs. This will be done by the section chairman.

8.4

Batteries must meet IEC standards. A copy of these standards will be available from IFMAR to all manufacturers. General sizes: Sub C - 23.0 mm diameter (- tolerance only) - 43.0 mm length (- tolerance only). Sizes measured without heat shrink in case of doubt.

8.5

Batteries can be checked by organization at any time on legality. It is the driver responsibility to have batteries that comply with the current IFMAR regulations. Batteries weight can be checked and have to comply with weight specification sheet as listed on IFMAR battery spec list. A weight scale will be available at all time to carry out weight checks.

8.6

1/10th cars will be driven by a maximum of **5 (five)** cells. (6.0 volts nominal)

1/12th cars racing modified motors will be driven by 4 cells (4.8 volts nominal)

8.7 additional batteries are allowed to power the radio equipment in the car

Proposed (1) by NOMAC HOLLAND

Not Seconded

9. Motors proposal:

Replace and delete 9.1/9.2/9.3

for: **Brushed Motors**

9 Motors need to be commercial available at all time and meet all technical specifications as mentioned in 9.2

9.1 Delete Can diameter: max 36.00mm including endbell.

Can length: max 57.00mm including endbell. Ball bearings only.

Magnets: size and material free. Only 2 magnets allowed with one pole per magnet.

Armature: 3 segment armature only. Stack length 21.00mm min - 25.00mm max (including hysol/armature insulation). Outside diameter max 23.0 mm. Min 60 – max 70 silicon steel laminations of 0.35mm.

Production tolerance of 0.025mm allowed. Laminations need to follow up without anything in between. Stack size 4.5mm (5mm with hysol). Spalt size min 4.00mm - max 4.15mm. Axle parallel aligned spalt only.

Commutator: Pure copper only. Min copper size 6.8mm, max 9.0 mm. 3 segments only, one per pole.

Shaft: diameter .125 inch, stainless steel only.

Wire: only pure copper circular round wire allowed.

Brushes: 2 maximum, with a maximum circular (diameter) size of 5mm. Current to commutator supplied by brush only. Brush conductive material only to contain copper, and/or silver and carbon.

Anything to increase long live stability like epoxying, cutting comm, add cooling fans/parts, balancing armature, commutator protectors, etc is allowed.

New motors need to be commercially available at the event, 100 pcs minimum.

9.3 definition of a std motor

See appendix 10

9.4 General Definition of a brushless Motor etc

addition:

: Delta wound stators allowed

Proposed (1) by NOMAC HOLLAND to be forwarded to the task group

Proposal: delete section 11, app 3 (page 114/115) Clas does not exist anymore

App 3 Page 115

Proposed (1) by NOMAC HOLLAND

Withdrawn by Holland

12.1 Bodies

Only replica's of real touring cars that have a minimum lenght of 4200 mm in the original car are allowed. No GT or Sports car bodies allowed. All Touring car bodies to be submitted to the Efra Bodysshell Homologation officer for approval.

Proposal:

Only replica's of (real 4-door) touring cars that have a minimum lenght of 4200 mm in the original car are allowed. No GT or Sports car bodies allowed. All Touring car bodies to be submitted to the Efra Bodysshell Homologation officer for approval.

Bodysshells has to be send in by the manufacturers before the 15th of December. (if postmark or

stamp [from transportcompany/postal services] date is 15th of december or later, the bodies won't be homologated)

A manufacturer can send a maximum of 3 bodies of his choice. The bodies has to look like a touring car body with the part nr printed in the front screen.

The Efra Bodyshell Homologation Officer (EBHO) will approve or disapprove the bodysHELLs before/at the end of December and a list of all approved bodysHELLs will be publised on Efra site at least in the first week of January, but preferable at the end of December. The new List will be valid from the first of January.

It is the manufacturers own responcebility to send his bodysHELLs to the EBHO and to make sure that the bodysHELLs will reach the EBHO in time. BodysHELLs not in at the end of December will not be homologated.

(Only in special circumstances like a strike at the postal / transporter service in the homeland of the EBHO, bodysHELLs received later as 31th of december, and with a postal stamp / transporter date before the 15th of december, will be allowed for approval.)

Proposed (1) by NOMAC HOLLAND

Withdrawn by Holland

page 116 12.4.6

Only three sets of 4 tyres per driver are allowed for both qualifying and finals. Tyres from qualifying may be used in the finals.

Proposal:

**Only three sets of 4 tyres per driver are allowed for both qualifying and finals in the dry.
All Tyres may be used for qualifying and finals.**

Proposed (1) by NOMAC HOLLAND

Seconded by: Sweden

Defeated 5 to 3

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

Must be added;

3 sets of 2 tyres are allowed for qualifying, and 3 sets of 2 tyres are allowed for finals.
Tyres from qualifying may be used in the finals.

Remark *In order to get the sense of the proposal please add a small remark*

Just to clarify what was decided last year.

Proposed (1) by DASU Denmark

Seconded by: Austria **Approved** **9 to 4** and approved, text updated

9.3 The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

Use the same rule for Electric Track.
12T or Brushless.

Remark *In order to get the sense of the proposal please add a small remark*

No limit brushed motors will not be good and it seems that the brushless motors are not as good as we first expected.
Let us keep the 12T motors in the game for 1 more year before we decide to do something.
We want the drivers to go to brushless...this way they will, when the brushless motors get better than The brushed motors.

Proposed (1) by DASU Denmark
Seconded by: Austria

Defeated 8 to 4

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

App. 3, 2.4.a)

.....the round by round point system is used to determine the qualifying position.
If the tendency for wet weather at a race is more than 50%, the qualifying system must be changed to Best Time/Lap system.
Points accrued....

Remark *In order to get the sense of the proposal please add a small remark*

This makes qualifying more fair under wet weather conditions.

Proposed (1) by DASU Denmark
Seconded by: Norway

Defeated 10 to 1

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

. **App. 3, 7.12**.....and the front of the car.

In all classes where possible, an 8th scale number must in addition be placed on the roof of the body (NASCAR style) for absolute best identification. Numbers on front windscreens must be avoided
The organizers will supply the numbers.

Remark *In order to get the sense of the proposal please add a small remark*

It is constantly getting harder and harder for referees, race directors and race officials to get a quick Identification of the cars during a race.
This should help a little.

Proposed (1) by DASU Denmark
Seconded by: Holland

Approved 8 to 1 text updated

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

.For &:1Oth.....damage considerations.

Tyres must not be wet or greasy from additive at the start of a heat or final.
Technical Inspection can demand to check the tyres prior to each start.
European Championships.....

Remark *In order to get the sense of the proposal please add a small remark*

Proposed (1) by DASU Denmark
Seconded by: Austria Amended text amended Approved 7 to 0

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

3, 12.3.....a full sized car.

The leading edge of the wing must not be behind the front of the wing mounts.

Maxium cord.....

Remark *In order to get the sense of the proposal please add a small remark*

Proposed (1) by DASU Denmark Withdrawn by Denmark

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

10.8.....Tyres minimum width 3mm. Maximum width of 40mm.....

Remark *In order to get the sense of the proposal please add a small remark*

The wheels currently being produced are over 38mm wide.

Proposed (1) by BRCA GB
Seconded by: Denmark Amended in the text Approved 6 to 0

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

3 § 6, Race Procedures The Race Director is taking the decision if the track is wet or dry.

Remark *In order to get the sense of the proposal please add a small remark*

There are no rules in the Appendix ore General Race Procedures about this, and there should be in the rules who decide its wet ore dry heats and finals.

Proposed (1) by NRCBF NORWAY Withdrawn by Norway

7.20Tyre treatments will be at the discretion of the organisers, governed by health and track damage considerations.

EFRA will every year publish a list of tyre treatments allowed at GP and EC. Only odourless tyre cleaners or traction additives made for this use, will be approved on the list.

Use of other treatments ore substances will not be allowed and if used, the driver will be disqualified from the event.

Remark *In order to get the sense of the proposal please add a small remark*

At the TC EC 2005, there was used several substances who we think damage the track. Norway also thinks this is the only way to have fair rules.

Proposed (1) by NRCBF NORWAY Withdrawn by Norway

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

3.14 The track surface for 1:10 Electric Saloon Cars can be both asphalt or needle carpet.

Remark *In order to get the sense of the proposal please add a small remark*

It stands not clear in the rules wich surface shall be used for 1:10 Electric Saloon Cars.

Proposed (1) by SWEDEN

Seconded by: Holland Amended in the text Approved 8 to 1

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

12.4.6At EC's it is only Race Director gives his permission.

Only two sets of 4 tyres per driver are allowed for the qualifying heats. For the A-final 3 new sets of 4 tyres are allowed and for the other finals another one set.

Tyres from qualifying may beFor a re-run of a heat, no extra sets are allowed

Remark *In order to get the sense of the proposal please add a small remark*

A-finalists in an EC can afford this extra cost for tyres.

Proposed (1) by SWEDEN

Withdrawn by Sweden

9 ELECTION OF SECTION CHAIRMAN.

Robert Lee has been elected as **vice** section chairman for Electric On Road under the patronage of Frank Mostrey a

10 ANY OTHER BUSINESS,

None

11 ITEMS FOR GENERAL DISCUSSION.

These items are not rule changes and can be placed on the agenda of either the Main Meeting or any Section Meeting for general discussion.

Please indicate at witch meeting that you require this subject to be discussed.

These items should not be related to rule changes, as they will be discussed at the time that they are proposed. In general terms these items should matters that can or have caused concern to the well being of a National federation, EFRA or IFMAR and need to be discussed to ensure that matters are resolved and not allowed to get out of hand.

PROPOSED BY: Austria - OFMAV

The exact wording of the proposal from our Federation is:

The deleted section, or amendments are highlighted in bold, cursive text)

Sorry, no exact wording, since I think this matter should be clarified by EFRA Executives

Remark *In order to get the sense of the proposal please add a small remark*

The matter is the reallocation fees.

In Electric TC it is common that there are far more people interested in participation than places available firsthand.

Then again some/many people stand back of their allocated places, and their places get reallocated.

But reallocation fee is 1.1/2 of standard allocation fee. Whilst the place is already paid for once by another country. (The 150% reallocation fee is in my opinion only sensible if there where enough places firsthand)

So all in all the reallocated place "costs" 250% of a normal starting place, shared by the driver/country who originally was allocated, and the poor guy who maybe wanted to go firsthand but didn't get a starting-lot because of over-allocation, and even had to wait until the "last" moment.

Two possible suggestions.

- 1) If a place already paid for is reallocated: only 50%-100% (matter of discussion) to be paid by the "new" driver. (Maybe hard to execute for Jean-Luc / EFRA-Treasurer)
- 2) If there was an over allocation at the AGM: reallocation is in general only 100% fee.

Advised to brought forward

PROPOSED BY: DASU, Denmark

Appendix 3, rule 12.3

Wing endplates (side dams) are allowed to be above the roof – or not?

We have to specify this issue.

22:50 meeting closed