British Rallycross Championship 5 Nations Trophy Presented by Cooper Tires
2021 MOTORSPORT UK BRITISH RALLYCROSS CHAMPIONSHIP
SPORTING & TECHNICAL REGULATIONS
PUBLISHED COPY

1. SPORTING REGULATIONS - GENERAL

1.1 Title & Jurisdiction:

The Motorsport UK British Rallycross Championship is promoted by Lydden Hill Race Circuit (LHRC) organised and administered by the Lydden Hill Motorsport Club (LHMC) in accordance with the General Regulations of Motorsport UK (incorporating the provisions of the International Sporting Code of the FIA) and these Championship Regulations.

Championship Permit No.:	CH2021/S004
Status:	National
Championship Grade:	A

1.2 Officials:

1.2.1 Coordinator:	Hannah Rynston, hannah@lyddenhill.co.uk 01304 830557
1.2.2 Eligibility Scrutineers:	Dave Newton, daveynewton@msn.com, 07814 595132
Deputy Eligibility:	Neil White

1.2.3 Championship Stewards:
Any three of the Championship Stewards may sit to make a decision. In accordance with (G) 2.7, Championship Stewards may only adjudicate on any disputes, irregularities or appeals arising from the approved Championship regulations. Under (G) 2.7.1, Championship Stewards are also empowered to consider any request from the Championship Coordinator to penalise any Competitor for any breach of Championship regulations after holding a formal hearing to impose a penalty in accordance with C.2.1.1 (subject to the rights of appeal provided for in Section C). Under (W) 2.2.1, the Championship Stewards can only adjudicate upon any disputes, irregularities or appeals arising from the approved Championship Regulations. They are also empowered to consider any request from the Championship Coordinator to penalise any Competitor for breach of Championship Regulations and after holding a formal hearing, to impose a penalty in accordance with C.2.1, subject to the rights of appeal to the MSC provided in Section C.
The Championship Stewards are David Walton, Ed Muldoon, Brian Hopper.

1.3 Competitor Eligibility:
1.3.1 Entrants must be fully paid-up valid membership card holding members of LHMC and be in possession of a current Entrants Licences.
1.3.2 Drivers and Entrant/Drivers must be fully paid-up valid membership card holding members of LHMC, be Registered for the Championship and be in possession of a current speed National licence as a minimum.
1.3.2.1 Or be in possession of the highest grade of National Rallycross licence or FIA International Licence, together with their ASN's written consent ((H)25.2 and FIA ISC Article 2.3.7b applies).
A competitor shall not take time off school to participate in motor sport without the prior written approval of their school. If participation in the Championship requires absence from school, Drivers in full time school education are required to have the approval of their head teacher and a letter stating such approval from his/her school in order to fulfil registration for the Championship.
Acceptance of registration is entirely at the discretion of the Championship Organisers.
1.3.3 All necessary documentation must be presented for checking at all rounds when signing-on.

1.4 Registration:

1.4.1 Applications to register for the Championship must be completed using the registration form available from RallycrossBRX.com, or the Championship Coordinator. Where a car is entered for the Championship, by someone other than the Driver, it will be necessary for that Entrant (who must be in possession of a valid Entrants Licence) to complete the Registration Form along with, and nominating, their Driver. By applying for registration, the Entrant and Driver agree to be bound by these regulations, the technical regulations, and supplementary regulations for the Championship as well as the

regulations of Motorsport UK and any commercial regulations issued by the Championship Organisers. Acceptance of applications is entirely at the discretion of the Championship Organisers.

1.4.2 The registration fee is £125 for the full Championship or £35 per round on a round-by-round basis.

1.4.3 Applications for registration open with the publication of these regulations and close at the closing date for entries of the final round.

1.5 Championship Rounds:
1.5.1 The Championship will consist of seven events

Round	Date	Venue	Entry closing date	Organising Club
1	29 May 2021	Lydden Hill		LHMC
2	31 May 2021	Lydden Hill		LHMC
3	10/11 July 2021	Mondello Park (IRL)		MPSC
4	29/30 August 2021	Pembrey		LHMC
5	25/26 Sept 2021	Knockhill		LHMC
6	6/7 Nov 2021	Lydden Hill		LHMC
7	4/5 Dec 2021	Spa Francorchamps (BEL)		BORA

Entry fees for each meeting will be confirmed in the Supplementary Regulations and on the championship entry form.

The Organisers reserve the right, in accordance with the Motorsport UK Yearbook D11.2, to cancel, postpone, change, or substitute events if necessary due to exceptional unforeseeable conditions, and are not liable for any damages so incurred as a result.

1.5.2 Entry secretary: Simone Cornish, simone@lyddenhill.co.uk 01304 830557
LHMC, Lydden Hill Circuit, Wootton, Kent, CT4 6ET

1.5.3 Circuits used in the Championship are licenced by Motorsport UK and approved for all classes of rallycross car up to and including Supercar.

1.6 Scoring:
1.6.1 In order to score points, collect trophies and awards, all cars and Drivers competing in the Championship will be required to display and wear Championship Sponsors' branding in the nominated position on clothing and vehicle. Non-compliance will result in loss of points, trophies, and awards for that event. The position of branding to be carried on cars and clothing will be specified the Championship Branding Guide (7, Commercial).

1.6.2 The Championship Organisers reserve the right to enter a guest car(s) into any Championship event. Such entries will not be registered for the Championship and will not score points but can qualify for event awards. Guest competitors must comply with the eligibility criteria as prescribed in article 1.3 above. With the exception of 1.3.1(a) and (b) and 1.3.2 (a) and (b) as appropriate.

1.6.3 The allocation of Championship points will be determined as follows:
First to eighth positions will be the classification of the final.

In any event where the semi-finals, and/or the final is not run, competitors will score full championship points based on positions at the Intermediate Classification or the qualifying order for the final and the Intermediate Classification as appropriate.

PUBLISHED COPY

Championship points will be awarded for the Intermediate Classification as shown below.

1st	16 points	9th	8 points
2nd	15 points	10th	7 points
3rd	14 points	11th	6 points
4th	13 points	12th	5 points
5th	12 points	13th	4 points
6th	11 point	14th	3 points
7th	10 points	15th	2 points
8th	9 points	16th	1 point

Championship points will be awarded for semi-finals as shown below.

1st	6 points
2nd	5 points
3rd	4 points
4th	3 points
5th	2 points
6th	1 point

Championship points will be awarded for finals as shown below.

1st	8 points
2nd	7 points
3rd	6 points
4th	5 points
5th	4 points
6th	3 points
7th	2 points
8th	1 point

All championship rounds count towards the championship – There are no drop scores.

Where events run combined with other championships, only those registered in the Championship will be awarded points.

All Championship events will score maximum points regardless of distance.

1.6.4 If a dead heat is declared in any race, semi-final or final, all the Drivers concerned will score full points for that place.

In the event of a tie between two or more Competitors in the Championship, the greater number of first place finishes achieved by the Competitors involved in the tie will be used to determine the overall final standing.
Should a tie still exist, it will be resolved by taking into account the greater number of second places achieved; then third places etc.
Should a tie still exist, it will be resolved by taking into account the number of competitors (i.e., points scorers) beaten during the season by each Competitor.

1.6.5 Championship Points Appeal C6.5.

1.6.6 Any competitor penalised at a championship event and incurs licence penalty points will also receive a championship penalty which will be a deduction of championship points 5 x the licence penalty points endorsed i.e., fine = 3 licence points plus a deduction of 15 championship points.

1.6.7 Event Penalties
Where a competitor is disqualified from a qualifying race, semi-final or final, or from the event, that event must be one of those counted towards the end of year score among those contributing to his/her championship score.

PUBLISHED COPY

1.7 Awards:

1.7.1 All trophies will be presented to the drivers as soon after the last race as is practical. To receive event trophies, the driver must attend the prize-giving in race-wear with branding correctly displayed. Cooper Tires caps will be given to competitors and must be worn for the duration of prize giving. Prize giving will be conducted in accordance with local coronavirus regulations which will be provided in the Final Instructions.

1.7.2 Trophies will be presented at each event to drivers as follows:
1st, 2nd, and 3rd: A trophy

1.7.3 End of season awards are Trophies and will be presented as follows
The British Rallycross Champion, a trophy
Second place, a trophy
Third place, a trophy
The British Rallycross Champion is required to attend the Motorsport UK Annual British Championship Awards presentation.

1.7.4 Bonuses:
The Championship Organisers will endeavour to obtain sponsored awards or bonuses during the series and reserve the right to introduce same at any time without any obligation to distribute such awards retrospectively.

In the event of any Provisional Results or Championship Points Tables being revised after any provisional awards presentations and such revisions affecting the distribution of any awards, the Competitors concerned must return such awards to the organising club for the event concerned in good condition within seven days.

1.7.5 Entertainment Tax liability

In accordance with current government legislation, the organiser is legally obliged to withhold tax at the basic rate on all payments to non-UK resident sportsmen/women and account to HMRC using form FEU1, the quarterly return of payments made to non-resident entertainers and sportsmen/women.

That is, those persons who do not have a normal permanent residence in the UK. The UK does not include the Isle of Man, Channel Islands or Eire. This means that, as the organiser, LHMC is required to deduct tax at the current rate applicable from any such payments they may make to non-UK residents.

Under certain circumstances, it may be possible for competitors to enter into an agreement with HMRC to limit the tax withheld. Any application for such an arrangement must be made in writing and not later than 30 days before the payment is due.

For further information contact:

Charities, Savings and International 1
HM Revenue and Customs
BX9 1AU
United Kingdom
Tel: 03000 547 395

PUBLISHED COPY

2. SPORTING REGULATIONS - JUDICIAL PROCEDURES

2.1 **Rounds:** In accordance with Section C of the current Motorsport UK Yearbook these regulations and any Supplementary regulations for the event.

2.2 **Championship:** In accordance with Section C of the current Motorsport UK Yearbook and these regulations.

2.3 Any Regulation clarifications necessary during the year will be notified in writing to all registered Competitors in an Official Bulletin (Motorsport UK Yearbook D11.2).

2.4. TECHNICAL DISPUTES

2.4.1. The Organisers and the Championship Eligibility Scrutineer reserve the right to check, seal and/or remove any suspect part for more detailed examination.

2.4.2 The Organisers and the Championship Eligibility Scrutineer also reserve the right to impound individual parts or the whole car without prior notification.

All costs will be borne by the Competitor.

PUBLISHED COPY

3. CHAMPIONSHIP MEETINGS & PROCEDURES

3.1 **Entries:**

3.1.1 Competitors are responsible for submitting correct and complete entries with the correct entry fee prior to the closing date for entries before each Event.

3.1.2 Incorrect or incomplete entries (Including driver to be nominated entries) are to be held in abeyance until they are complete and correct and the date of receipt for acceptance of entry purposes shall be the date on which the Entry Secretary receives the missing or corrected information or fee.

3.1.3 Any withdrawal of Entry or Driver/Car changes made after acceptance of any entry must be notified to the Entry Secretary in writing. Motorsport UK Yearbook D25.1.12 applies.

3.1.4 The Entry Fee for each event shall be specified in the Supplementary Regulations and on the entry form.

3.1.5 Reserves will be listed in the Final List of Entries published with Final Instructions or in a Bulletin.

3.2 **Briefings:**

Organisers should notify Competitors of the times and locations for all briefings in the Final Instructions for the meetings. Competitors must attend all briefings. However, briefings will be conducted in compliance with local coronavirus regulations which may include electronic briefings in advance of the event.

3.3 **Practice:**

3.3.1. Should any Practice session be disrupted the Clerk of the Course shall not be obliged to resume or re-run the session, the decision of the Clerk of the Course shall be final.

3.3.2. Each driver shall complete a minimum of 3 laps in the car to be raced and in the correct session.

3.4. **Races:**

3.4.1 Each event will consist of practice, up to four rounds of Qualifying races, semi-finals and final.

3.4.2 A joker lap will be used where the circuit track licence allows. This will be advised in final instructions or official bulletin. In each qualifying heat, one of the laps must be the Joker Lap. In the Qualifying races any driver who does not take the joker lap will receive a penalty of 30 seconds. In a semi-final or final any driver who does not take the joker lap will be classified last in that race. Two judges of fact will be appointed to note the numbers of the cars passing through (one judge of fact where there is a timing loop in the Joker Lap). At the exit of the joker lap, the cars on the main track have priority. (see Motorsport UK Yearbook N5.1.4).

3.4.3 This category will start Qualifying Races in 3-2-3 or 5 abreast formats up to the maximum allowed by the track licence. In all cases the decision of the Clerk of the Course is final, grid format may be amended at the discretion of the Clerk of the Course. Grids for semi-finals and finals will have a maximum of eight starters in 3-2-3 format.

3.4.4 The grids for the first Qualifying races will be pre-determined. The grids for the second Qualifying races will be based on the result of the first Qualifying, the grids for the third Qualifying races will be based on the result of the second Qualifying and the grid for the fourth Qualifying races will be based on the result of the third Qualifying. (i.e., the fastest driver in Qualifying one will be on pole for the last race for the second Qualifying. The second fastest will be in second grid slot in the last race, etc). Where there are two or more races per Qualifier, the number of starters will be split as equally as possible over the races run.

3.4.5 Qualifying heats will be run over 4 laps, semi-finals and finals will be run over six laps. Race length may be changed at the discretion of the Clerk of the Course.

3.4.6 If there are fewer than 10 entries in a Championship or class, the Clerk of the Course may run combined races in qualifying and finals for those cars.
Championships and classes may be amalgamated for the duration of the events at the discretion of the Clerk of the Course. Any such amalgamation will be detailed in final instructions or other bulletins.

PUBLISHED COPY

3.4.7 Should any race be disrupted the Clerk of the Course shall not be obliged to resume or re-run the race.

3.5 Qualifying points

3.5.1All the Qualifying Heats will be timed, and the fastest Driver in each Qualifying will be awarded 50 points, the second fastest 45 points, the third fastest 42 points, the fourth fastest 40 points, the fifth fastest 39 points, the sixth fastest 38 points, the seventh fastest 37 points, and so on.

3.5.2 Those Drivers who did not complete a Qualifying (DNF) will be credited with a total of points equal to the number of points that the slowest Driver would be given, less one point, supposing that all the starters in the Competition were classified. Those Drivers who did not start the Qualifying (DNS) and those Drivers who were disqualified (DSQ) from the Qualifying will not be credited with any points. In the event that two or more Drivers achieve equal times, they will be separated according to their best lap time during the Qualifying concerned.
If a race is restarted, a Driver who started in the first or subsequent starts, but was not able to start in the race that was completed, will be shown as DNF instead of DNS and will be credited with the appropriate number of points

3.5.3 After the Qualifying Heats, there will be an intermediate classification according to each Driver's total points scored in the four Qualifying Heats. In the event of tied positions in the intermediate classification, precedence will be given to the Driver who has the greater number of first places, then second places, then third places, etc., achieved in all the Qualifying Heats. In the event of further tie, precedence will be given to the Driver who was the fastest in the last Qualifying. To appear in this intermediate classification, a Driver must have crossed the finish line having completed the same number of laps as the winner and been duly classified in at least two qualifying heats.

3.5.4 Semi-finals will only be run if there are a minimum of 10 qualifiers able to participate. A driver who has qualified for the semi-finals or final but is unable to take the start and does not inform the organisers of this may be penalised with the loss of Championship points.

3.5.5 To be classified as a finisher and qualify for the semi-finals or final a competitor must have completed at least one Qualifying race.

3.5.6 The results of all qualifying races will count in the Intermediate Classification.

3.6 **Finals**

3.6.1 The 16 top scoring drivers in the intermediate classification will qualify for the semi-finals. The winner, second, third and fourth place driver in each semi-final will qualify for the final. The semi-finals will only be run if there are at least 10 cars able to participate a minimum of five cars per semi-final; if the semi-finals are not run, the nine top-scoring drivers in the intermediate classification will progress directly to the final.

3.6.2 Semi-finals and finals will be run over six. From the Intermediate classification, drivers placed in positions 1,3,5,7,9,11,13 & 15 will start in semi-final one. Drivers placed in positions 2,4,6,8,10,12,14 & 16 will start in semi-final two.

3.6.3 Of the two semi-final winners, the one placed higher in the Intermediate Classification will start the final from pole, with the other starting second. The remaining grid places will be taken by the two second placed finishers, the two third placed finishers and the two fourth placed finishers (in each case the position in the Intermediate Classification which will determine which of each pair starts ahead of the other).

3.6.4 Reserves – Should any of the semi-final or final qualifiers be unable to take their place on the grid, the other starters in the race will move up and the last place on the grid will be taken by the next qualifier able to start. In the semi-finals, that means those from seventeenth down in the Intermediate Classification. In the final that means the highest placed in the intermediate classification of the two fifth-placed finishers from the semi-finals, then the other of the fifth-placed finishers. If neither of the fifth-placed finishers are able to start, the same method between the two sixth-placed finishers, etc.

PUBLISHED COPY

3.6.5 Final Classification – First to eighth positions will be the classification of the Final if semi-finals have been run. In the event of no semi-finals, first to ninth positions will be the classification of the Final. Ninth to 16th positions will be the semi-finalists who did not start in the final ranked by their classification in their semi-final. Drivers finishing in the same position in the two semi-finals will be classified according to their position in the Intermediate Classification (i.e., of the two fifth placed semi-finalists, the one placed higher in the Intermediate Classification will take precedence, etc.). If there are two or more non-finishers, they will be classified according to the distance covered or, if no complete laps were recorded, according to their grid position. 17th position onwards will be as per the Intermediate Classification.

3.6.6 To compete in the semi-finals or final, all competitors and their cars must be at the pre-grid area before the previous race has started. Should a competitor not be present and ready to race when the race is ready to be released from pre-grid, then the next placed qualifier may be allowed to start.

3.7 **Starts:**

3.7.1 Competitors will miss their qualifying race/final if they are not ready in the pre-grid when cars are released and will not be placed in a later race.

3.7.2 The pre-grid marshals shall have the right to ask excessive support crew to leave the pre- grid.

3.7.3 Only event officials and drivers will be permitted in the start area, unless otherwise instructed by the Clerk of Course.

3.7.4 Competitors must take their starting position safely as directed by the start line official without delay. Any competitor who causes a delay may be refused a start.

3.7.5 Competitors must be within 120mm of the grid line at the start of the race.

3.7.6 Any drivers unable to start a race or final must inform the Organisers at the Paddock Office in good time before that race.

3.7.7 All cars will be released from the pre-grid to form up on the grid prior to the start in formation as specified on the grid sheet.

3.7.8 The start will be via a Standing start. Competitors will be shown a “Ready to Race” sign to indicate that the start is imminent. The signal for the race start will be the green lights coming on. In the event of a false start there will be flashing red light and the start procedure will be undertaken again

3.7.9 In the event of any starting lights failure the Starter will revert to use of the National Flag once all competitors have been advised of the fact

3.7.10 The Organisers reserve the right to amend this start procedure via a bulletin issued to all competitors. This may involve changing the method of starting and/or the countdown procedure leading up to the start signal being given.

3.7.11 Electronic beams, or similar devices, will be used in conjunction with starting lights to detect false starts. These will be monitored by a judge of fact. When a false start occurs in a qualifying race, a semi-final or final, all competitors will return to their original starting position and the starting procedure will begin again. The competitor(s) who caused the false start must pass through the joker lap section twice in the race concerned (at a circuit with no joker lap, a competitor who causes a false start will be placed on an additional row at the back of the grid for the re-start). If any competitor commits a second false start they will be removed from the grid and not permitted to start and will be classified as disqualified from the race concerned.

3.7.12 The Clerk of Course may order a complete restart if he considers there to have been a faulty start.

3.7.13 In the event of the electronic equipment failing, a judge of fact, who will be named, will adjudicate on all starts. This may include instances where the lights do not lock, but a jump-start is evident.

3.8 **Session Red Flag**

3.8.1 Should the need arise to stop any race or practice; red flags will be displayed at the start line and at all marshals signalling points around the circuit.

PUBLISHED COPY

This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and to drive to the parc ferme or the starting grid area, as directed by officials. No work may be carried out on any car unless authorised by the Clerk of the Course or Scrutineer. Any car that returns to the paddock will be considered to have retired from the race.

3.8.2 Motorsport UK Yearbook regulations N5.3.2 to N5.3.2.8 inclusive shall apply.

3.9 **Race Finishes:**
After taking the Chequered Flag drivers are required to:
• progressively and safely slow down
• remain behind any competitors ahead of them,
• return to the paddock entrance as instructed,
• comply with any directions given by marshals or officials
• keep their helmets on and harnesses done up while on the circuit
• if so directed, place their car into the parc ferme where it must remain until released by the Championship Eligibility Scrutineer or his deputy

3.10 **Results:**
All Practice Timesheets, Grids, Race Results are to be deemed Provisional until all vehicles are released by Scrutineers after Post Practice/Race Scrutineering and/or after completion of any Judicial or Technical Procedures. (Motorsport UK regulation D26.3)

3.11 **Timing transponders:**
It is the Competitors responsibility to ensure that a working transponder of one of the types listed below is fitted to the vehicle.
• AMB260
• Mylaps car\bike (red)
• Mylaps X2 car\bike with active subscription
Cars fitted with other makes or types of transponder will not be included in any practice or race results.
It is, therefore, the responsibility of each competitor to:
• Fit an appropriate Transponder in the location approved for the type/class of car.
• Provide the unique 7-digit Identification Number of the Transponder being used on the Entry Form for each event
• Ensure the transponder is secure and in good working condition for every practice, heat and final
• Notify the Secretary of the Meeting of any change of transponder being used.
• Replace any transponder damaged, lost, or inoperative.
Any competitor starting a practice, heat or final with an inoperative transponder will not be timed until the defect has been rectified or a replacement transponder has been fitted.
Any competitor starting a practice, heat or final using a transponder registered to another competitor will not be timed until the Secretary of the Meeting has been informed of all changes relating to the use of that transponder.

3.11.1 No electronic equipment may be placed within five metres of any official timing line and any breach of this may result in the confiscation of the equipment concerned.

3.12 **Paddock**
3.12.1 Competitors must ensure that the Motorsport UK, Circuit Management and Organising Club Safety Regulations are complied with at all times. In addition, any paddock plan issued by the Organisers must be complied with and the minimum amount of space should be used when setting up.

3.12.2 Refuelling:
A refuelling area will be provided, and all competitors must purchase their fuel from and be refuelled in this area. Race and super unleaded fuel will be available at all rounds. The fuel supplier will operate the refuelling zone and will also carry out fuel checks. The penalty for non-compliance will be exclusion from the event.

3.12.3 The championship reserves the right to admit guest competitors running non-control fuel, prior approval must be sought from the championship coordinator. Any guest running non-control fuel is not eligible for championship points but can event awards.

PUBLISHED COPY

3.13 **Scrutineering**

Competitors may be issued with a scrutineering time. It is the competitors' responsibility to attend at this time. If competitors are unable to attend, permission for an alternative time must be sought from the Clerk of the Course.

Competitors will not be permitted to go through scrutineering until decal placement has been checked and the car has been weighed.

PUBLISHED COPY

4. PENALTIES:

4.1 Technical infringements arising from post-practice Scrutineering or Judicial Action: Minimum Penalty; The provisions of Regulations: C3.3.

4.2 Arising from post event Scrutineering or Judicial Action: Minimum Penalty; The provisions of Motorsport UK Regulations: C3.5.1. (a) and (b).
For infringements deemed to be of a more serious nature the Clerk of the Course and/or Stewards of the Meeting are to invoke the provisions of Regulation C3.5.1. (c).

4.3 Repeated Technical Infringements will be referred to the Championship Stewards for consideration of exclusion from the Championship of the Car, Driver or Entrant.

4.4 Infringements of non-technical Motorsport UK Regulations and the Sporting Regulations issued for the Championship in accordance with the Motorsport UK Yearbook section C; any such penalties may affect a competitor's eligibility for Championship points and awards.

4.5 If it appears from any evidence that there may have been actions by a competitor, or a member of his team considered to have bought the championship into disrepute the Championship Co-Ordinator will be entitled to request that the championship Stewards consider the inception of an inquiry into the matter. Penalties may include individual event bans, loss of event awards and or end of season awards, loss of championship points or exclusion from the championship. The Championship stewards' judgement will be subject only to the right of appeal to the Motorsport UK.

PUBLISHED COPY

5. TECHNICAL REGULATIONS - GENERAL

5.1 **Eligible vehicles**
As defined in 6.

5.2 **Fuel**
Vital Equipment has been appointed as the single fuel supplier. All fuel must be purchased onsite from the supplier which will operate a refueling zone in which all refueling must take place. Either Carless Superplus or Carless Turbo Ultimate Dev may be used.
5.2.1 Fuel sampling and testing; Motorsport UK Yearbook J5.13.7 and D34 apply.
5.2.2 Comparison testing may take place at any stage of any event in the Championship. Fuel must be equal to or better than 99.90% to be deemed compliant in comparison testing.
5.2.3 Competitors competing as a guest may be permitted to run on non-control fuel subject to compliance with 3.12.3.

5.3 **Telemetry / Voice Communications**
5.3.1 Any form of wireless data transmission between the vehicle and any person and/or equipment is prohibited while the car is on the track.
This definition does not include:
– Voice radio communications between the driver and his/her team
– Transponder from the official timekeeping, and
– Automatic timing recording.
None of the previously mentioned transmission data may in any way be connected with any other system of the car (except for an independent cable to the battery only).
On-board data recorders are allowed.
The transmission of data by radio and/or telemetry is prohibited.
On-board TV Cameras are not included in the above definitions.
Data transmission through a temporary physical connection is allowed in the paddock only.
5.3.2 The use of radio between the driver and his/her team is authorised.

5.4. Judicial Cameras
5.4.1. All cars must carry a forward-facing camera, positioned to show the driver's feet, hands and the view through the front windscreen. A rear facing camera is also recommended. Cameras must record in HD quality and have a removable memory card. Systems with multiple cameras must be set to display images so that any 'inset' views do not obscure the view through the front windscreen or of the driver's hands and feet. Cameras must be mounted before scrutineering. Suction mounts are not permitted.
5.4.2. It is the driver's responsibility to ensure that that camera is recording during practice, ~~heats~~ qualifying and finals.
5.4.3. It is the driver's responsibility to ensure that the battery life and memory card space is adequate to record the entire race and until the car is parked in the paddock or parc ferme. The memory card must contain only the current event.
5.4.4. Video must be made available to the clerk of the course on request. The driver must present any video requested by the Clerk of the Course on his own laptop/tablet, cued and ready to play.
The penalty for non-compliance with any of the above will be exclusion from the race.
5.4.5. The Clerk of the Course may request memory cards be left with him. Drivers must record the serial numbers of their memory card(s) to avoid any confusion when the card(s) are returned. It is the driver's responsibility to ensure they have a spare memory card available.
5.4.6. Judicial camera video can be used only by the officials and the Championship organiser. With the exception of cameras installed by the Championship TV contractor no other on car/in car video, still or motion picture cameras will be permitted without the written authority of the Championship Coordinator. For the avoidance of doubt, Competitors may not allow footage from the judicial camera to be published in any way without the written authority of the Championship Coordinator.

5.5. Numbers & Championship Identification
5.5.1 Competition numbers will be supplied by the Championship organiser. Only the numbers supplied can be used. Numbers must be positioned as detailed in the Championship Branding Guide. Where the

PUBLISHED COPY

car has no rear side window, positioning of the numbers will be by agreement with the Championship Organisers.

5.5.2 The driver's surname must be displayed on the rear side window. The driver is responsible for providing this decal which must be as specified in the Championship Branding Guide. Where the car has no rear side window, positioning of the driver's name will be by agreement with the Championship Organisers.

5.6 Safety Requirements

5.6.1. Each competitor is required to carry at least one fire extinguisher and have it available for use at their service area/garage (for the avoidance of doubt, where more than one car shares a paddock space, this means at least one extinguisher per car).

5.6.2 Each team shall provide a ground sheet which the competition vehicle must be parked on throughout servicing.
Any competitor who does not comply with 5.6.1 or 5.6.2 will be refused permission to start until they comply.

5.6.3 Waste oil, tyres and other consumables must only be disposed of in the specifically provided waste receptacles at the venues (NOT general waste bins), or if not provided be taken home.

5.6.4 If the engine is run with the gears engaged whilst the vehicle has any driving wheels not in direct contact with the ground the car must be supported stands (not jacks), a competent person must be in the driver's seat while the engine is running and there must be a safe zone around the car with only essential personnel admitted while the engine is running. Each driver/entrant is responsible for controlling and managing this within their own paddock space and for briefing their own personnel on all matters of safe working.

5.6.5 The use of tyre heating/heat retention devices in the paddock, on the pre-grid or start line is prohibited.

PUBLISHED COPY

6 SPECIFIC SUPERCAR TECHNICAL REGULATIONS

6.1 **Introduction**

The following Technical Regulations are set out in accordance with the Motorsport UK specified format, and it should be clearly understood that if the following texts do not clearly specify that you can make a modification you should work on the principle that you cannot.

6.1.1 A Supercar is a rigidly closed non-convertible model, that either is, or has been, homologated in Group A/N (Kit Car and World Rally Car disqualified) or in Supertouring and conforming to Appendix J Group A (Articles 251 to 255). Cars not homologated with the FIA but produced in series and regularly on sale through a recognised commercial network are also eligible. Cars complying with the FIA technical regulations for Rallycross Supercars as specified in article 279 of FIA Appendix J in their entirety are also eligible.

6.1.2 This championship is also open to Projekt E vehicles as defined in Appendix 1 and approved by Motorsport UK.

6.2 **General Technical Regulations and Requirements**

6.2.1 Cars must comply with the Technical Regulations published by the Organisers for The Championship throughout official practice, qualifying heats, and finals.

6.2.2 All cars must comply fully with the current Motorsport UK Yearbook J Common Regulations for Competitors: Vehicles and Rallycross Technical Regulations N6 or N8 and these regulations.

6.2.3 No approved modification may give rise to an unapproved one.

6.2.4 The use of magnesium alloy sheet is not permitted. Titanium sheet may only be used for heat shields

6.3 **Safety Requirements**

6.3.1 Minimum Comply with current Motorsport UK Yearbook regulation N 6.11 to 6.12.6. inclusive.

In addition:

6.3.2 Currently FIA Homologated competition seat and mountings are mandatory

6.3.2.1 The seat must be mounted entirely to one side of the vehicle's centreline.

6.3.3 Currently FIA Homologated Seat Belts are mandatory (minimum 6-point attachment).

6.3.4 All cars must be fitted with a FIA homologated extinguisher system plumbed to the engine bay and the cockpit.

6.3.5 In addition to the minimum apparel standards set out in Motorsport UK General Regulations K9 the following are mandatory:

- flame resistant race suit homologated to FIA 8856-2000 or FIA 8856-2018 standard
- flame resistant gloves and shoes
- flame resistant underwear
- flame resistant balaclava
- Frontal Head Restraint (FHR)

6.3.6 The side windows on the driver's side of the car must remain closed. A sliding window in the side windows of the driver's and passenger's doors may be fitted. The opening must be a minimum of 130mm x 130mm and a maximum of 150mm x 150mm. The sliding windows must be closed at the start of the race.

6.3.7 The use of FIA-approved 8863-2013 safety racing nets (see FIA Technical List No. 48) on both sides of the driver is recommended. Where used, racing nets must be fitted in accordance with "FIA Racing Nets Installation Specification for Touring and Grand Touring Cars". Window nets must not be used where racing nets are used.

6.4 **Chassis & Bodywork**

6.4.1 The original bodywork must be retained, other than as detailed below.

The series-production bodyshell and chassis must be retained but the original basic structure may be reinforced in accordance with current FIA Appendix J Article 255.5.7.1.

6.4.2 The bodywork may be modified in accordance with current FIA Appendix J Article 279. All the measurements will be taken in relation to the middle of the front and rear axles of the homologated bodywork. The materials added must be ferrous and must be welded to the bodywork.

6.4.3 In order to install the catalytic converter, it is allowed to make a hollowing out in the central tunnel as described in current FIA Appendix J Article 279.

PUBLISHED COPY

6.4.4 Except for the driver's door, the material is free, provided that the original outside shape is retained.
6.4.5 Door hinges and outside door handles are free. The original locks may be replaced but the new ones must be efficient.
6.4.6 The original driver's door must be retained, trim may be removed.
6.4.7 Trim strips, mouldings, etc., may be removed.
6.4.8 Under no circumstances can any part of the bodywork or the suspended parts of the car be below a horizontal plane passing 40mm above the ground, the car being in normal race trim with the driver strapped into his/her seat.
6.4.9 Windscreen wipers are free, but there must be at least one in working order.
6.4.10 All cars will be equipped with front and rear towing eyes strong enough for a recovery vehicle to tow the car.
The towing eye must have a hole of minimum dimension 25mm x 40mm situated 25mm forward of the adjacent bodywork. The area 100mm above and below the towing eye must allow clearance to enable the rescue crews to attach straps and shackles. The surrounding bodywork must be flexible or deformable in order to access to the towing eye. They must be clearly marked, visible and painted yellow, red, or orange in contrast to the colour of the car.
6.4.11 At the start of each heat or race the car must be fitted with mudflaps behind all four wheels extending to a minimum of 38mm either side of the tyre tread and to a maximum of 76mm above the ground, or in compliance with current FIA App J Article 279.
6.4.12 At least one mirror of a minimum surface area of 500mm2 must be securely mounted and positioned to give a clear view to the rear. The edges of the mirror must be protected by a suitable cover to reduce the possibility of injury in event of an accident.
6.4.13 The rear doors may be sealed shut by welding.
6.4.14 The locking devices on the bonnet and boot lid, as well as the hinges, are free, but each lid must be fixed at four points, and opening from the outside must be possible. The original closing systems must be removed.
6.4.15 Openings may be made in the bonnet for ventilation, provided that they do not allow mechanical components to be seen.
6.4.16 In all circumstances, the bonnets and boot lids must be interchangeable with the original homologated ones.
6.4.17 It is permitted to remove the window opening mechanisms from all four doors or replace electric winders with manual winders.
6.4.18 It is permitted to install one or two ventilation flaps in the roof of the car, in the following conditions:
a: maximum height 10 cm
b: displacement contained within the front third of the roof
c: hinges on the rear edge total maximum width of the openings: 500 mm
6.4.19 Front aerodynamic device
The material and shape are of free design, limited by:
a: The vertical plane passing through the axis of the front wheels and the horizontal plane passing through the lowest point of the door opening (FIA Appendix J Article 279 drawing 279-3).
b: The overall length of the homologated car.
c: To the front, by the vertical projection of the bumper of the homologated car.
d: The material of the bumper must remain unchanged (plastic remaining plastic, including composite materials). Aftermarket bumpers are permitted provided they are to the same pattern as the original equipment bumpers.
e: The safety elements allowing the absorption of impacts between the bumper and the chassis must be kept.
f: Modification of the lateral part of the front bumper: according to the definition of the fender (FIA App J, Article 251-2.5.7).
g: One or more openings may be made in the bumper (the part situated above the plane passing through the lowest point of the door opening), but the total surface of openings in the front shield must be no more than 2500 square cm.
h: These openings must not affect the structural integrity of the bumper.
i: The thickness of the front aerodynamic devices must be 2mm minimum and 5mm maximum.
6.4.20 Rear aerodynamic device:
a: It must have the maximum dimensions defined in current FIA Appendix J Drawing 279-4.
b: Even if the vehicle has original dimensions bigger than those maximum dimensions, it must comply with this drawing.

PUBLISHED COPY

c: At its extremities, this device must join the bodywork, and it must be entirely contained within the frontal projection of the car without its rear-view mirrors, and within the projection of the car seen from above.
d: The base of the box including the drawing must be the one with the largest dimensions. It must be positioned horizontally.
e: Further, this volume may be extended section by section, which means that at any point of the rear aerodynamic device, each section must not exceed the section 450mm x 290mm x 190mm, supports included.
f: The thickness must be 2mm minimum and 5mm maximum.
6.4.21 Under body protections are only permitted as defined in FIA Art 279 Appendix J ~~3.2.5.~~ 10.3.15.

6.5 **Engine**.
6.5.1 The engine is free, but the engine block must be from a model of car of the same original registered trademark as the car's original bodywork. Custom engines complying fully with FIA Appendix J, Article 279, 5.4 are eligible.
6.5.2 The engine must be located in the original engine compartment.

Permitted
• Carbon or composite materials (for clutches and non-stressed covers or ducts only).

Prohibited
• Twin-engine configurations (unless homologated in that form)
• Variable valve timing
• Variable length inlet trumpets
• Titanium (except in connecting rods, valves, valve retainers and heat shields)
• Magnesium (in moving parts)
• Ceramic components
• Internal and/or external spraying or injection of water or any substance whatsoever (other than fuel for the normal purpose of combustion in the engine).
• Variable diameter inlets and adjustable internal vanes on turbochargers
• Water injection (even if it originally exists on the homologated block)
• Spraying of the intercooler

6.5.3 Throttle as defined in FIA Appendix J, Article 279, 5.4.2.2 h.
6.5.4 All supercharged cars must be fitted with a restrictor as defined in FIA Appendix J, Article 279, 5.2.3.
6.5.5 The exhaust gases from the waste-gate must exit into the vehicle's exhaust system and must not be recycled in anyway. Furthermore, there must be no connection between the intake and exhaust systems
6.5.6 Supercharged cars must not be equipped with any device which allows the boost pressure, or the electronic management system controlling the boost pressure, to be adjusted by the driver while the car is in motion (except the throttle pedal).
6.5.6 Cars with forced induction will be subject to a coefficient of 1.7:1 as per current Motorsport UK Yearbook Regulation J 5.4.1

6.6 **Transmission**
6.6.1 The operating method and the design of the system are free except as below.
6.6.2 Traction control is prohibited.
6.6.3 Conversion to four-wheel drive is permitted.
6.6.4 Front and rear limited slip differentials must be mechanical. Active differentials are not permitted. Mechanical limited slip differential means any system, which works purely mechanically, i.e., without the help of a hydraulic or electric system. A viscous clutch is not considered to be a mechanical system.
6.6.5 In the case of a four-wheel drive vehicle, the addition of a hydraulic system or a viscous clutch to the central differential is allowed; in order to limit the slip, but this system must not be adjustable when the vehicle is in motion.
6.6.6 Any sensor, contact switch or electric wire on the four wheels, gearbox, or front, middle or rear differentials are forbidden. Only one sensor for displaying the ratio engaged is authorised on the gearbox, on condition that the sensor/electric wire/display assembly is completely independent of the engine control system.

PUBLISHED COPY

6.6.7 A maximum of two wires are permitted to the centre differential to power an electric oil pressure pump, provided that the wires serve no other purpose, and the differential is standard equipment for the make and model of vehicle. The system must not be adjustable when the car is in motion.

6.7 **Suspension & Steering**

6.7.1 Cars must be fitted with a sprung suspension.
6.7.2 The operating method and the design of the suspension system are free.
6.7.3 Front axle - Modifications to the shell (or chassis) are limited to:
a: the reinforcement of the existing anchorage points,
b: the addition of material for the creation of new anchorage points,
c: the modifications necessary to provide clearance for suspension components, drive shafts, and wheel and tyre.
The reinforcements and addition of material must not extend further than 100 mm from the anchorage point.
6.7.4 With the exception of subframes connecting the front to the rear, the front subframe is free as regards the material and the shape, provided that:
a: it is interchangeable with the original part and that the original number of anchorage points remains unchanged.
b: it can be dismounted (no welding).
6.7.5 Moving the anchorage points of the subframe is allowed provided that they are situated inside the new tunnel (see current FIA Appendix J article 279 8).
6.7.6 Rear axle -Modifications to the shell (or chassis), to accommodate the changed position of pivot and mounting points, are limited to those in FIA drawing 279-1.
6.7.7 The springing medium must not consist solely of bolts located through flexible bushes or mountings but may be of fluid type.
6.7.8 There must be movement of the wheels to give suspension travel in excess of any flexibility in the attachments.
6.7.9 The use of active suspension is forbidden.
6.7.10 Chromium plating of steel suspension members is forbidden.
6.7.11 All suspension members must be made from a homogeneous metallic material.
6.7.12 Hydro-pneumatic suspension systems are permitted, on condition that they do not have active control.
6.7.13 Quick release steering wheels are mandatory. The quick release device must be coloured yellow.

6.8 **Brakes**

6.8.1 The operating method and the design of the system are free except as below.
6.8.2 There must be a double circuit operated by the same pedal and complying with following:
6.8.3 The pedal shall normally control all the wheels.
6.8.4 In case of a leakage at any point of the brake system pipes or of any kind of failure in the brake transmission system, the pedal shall still control at least two wheels.
6.8.5 Anti-lock brake systems are not permitted.
6.8.6 The brake discs must be made from ferrous material.
6.8.7 A handbrake is mandatory it must be efficient and simultaneously control the two front wheels or the two rear wheels.
6.8.8 Fluid tanks are forbidden inside the cockpit.

6.9 **Wheels**

6.9.1 The complete wheel (flange + rim + inflated tyre) must always fit inside a U-shaped gauge of which the extremities are 250 mm apart, the measurement to be made on an unloaded part of the tyre.
6.9.2 The diameter of the rim is free but may not exceed 18”.

6.10 **Tyres**

6.10.1 The championship uses a control tyre supplied by Cooper Tires which must be used for all championship events. ~~except for at Lydden Hill 30/31 August & Knockhill 26/27 September where tyre choice is open to allow competitors with these tyres to use any remaining supplies, these must comply with 2019 regulations.~~ There is no limit on the number of tyres that can be used in the course of a meeting. The tyres are a control patterned tyre and cannot be hand cut at any time.

PUBLISHED COPY

6.10.2 Tyres which are permissible in the championship are shown in the list published on rallycrossbrx.com, we reserve the right to amend this tyre list at any time subject to approval via a Championship Bulletin.

6.11 **Electrics**

6.11.1 The nominal voltage of the electrical system including that of the supply to the ignition of the original car must be retained.
6.11.2 Relays, circuit breakers, fuses and cables are free.
6.11.3 A red rear warning light complying with current Motorsport UK Yearbook regulation K5 must be fitted
6.11.4 The make, number and capacity of the batteries are free
6.11.5 Have any wet batteries in the drive/passenger compartment enclosed in a securely located leak-proof container capable of retaining any leaked acid and protecting the terminals from short circuiting and producing sparks.
6.11.6 All lights may be removed but all cars must be equipped with two rear lights of the anti-crash type as used in fog with the minimum of 15 watts each and illuminating an area of 60 sq. cm. These must work with or replace the car brake light system at all times and must be between 115cm and 150 cm above the ground and must be clearly visible from behind.
6.11.7 Generators are optional, but the self-starter system must be operable at all times
6.11.8 Starting the car: Cars must be equipped with an electrical energy source to enable the driver to start the engine when normally seated with seat belts fastened.
6.11.9 Be equipped with an ignition cut-off switch having positive ON–OFF position clearly marked, and which must be operable by the driver when normally seated with seat belts secured. It must also isolate electric fuel pumps.

6.12 **Weight**

At all times, the minimum weight of the car with driver (wearing full racing apparel) will be 1300kg.

6.13 **Fuel Tank & Fuel**

6.13.1 If a non-original tank is fitted, it must be a safety tank homologated by the FIA in accordance with the specifications of current FIA Appendix J Article 253 Article 14.
6.13.2 The tank, the catch tank (buffer box), the pumps and all component of the fuel feed system shall be located at least 30 cm from the bodyshell in both lateral and longitudinal directions, outside the driver's compartment.
6.13.3 In all cases, the tank, including the filler pipe must be isolated by a firewall or by a container, both of which shall be flameproof and fire-resistant, preventing any fuel from infiltrating the cockpit and any contact with the exhaust pipes.
6.13.4 Should the fuel tank be installed in the boot and the rear seats removed, a fireproof and liquid-proof bulkhead must separate the cockpit from the fuel tank.
6.13.5 In the case of twin-volume cars, it will be possible to use a non-structural partition wall in transparent, non-flammable plastic between the cockpit and the tank arrangement.
6.13.6 The tanks must be protected effectively and securely attached to the shell or the chassis of the car.
6.13.7 The use of safety foam in tanks is recommended.
6.13.8 All the fuel pumps must operate only when the engine is running, or during the starting process.
6.13.9 not used
6.13.10 The requirements of J5.13.7. must be complied with.
6.13.11 Have sufficient fuel for a fuel test present at any time during the meeting to comply with the fuel sampling requirements as laid down in the Motorsport UK yearbook D34 Procedure for fuel testing.

6.14 **Exhaust & Silencing**

6.14.1 Exhausts systems must comply with the current Motorsport UK Yearbook regulations J5.16 and J5.17 and circuit restrictions.
6.14.2 All exhaust gasses including wastegate outlet must pass through the main exhaust system.

6.15 **Towing Eye**

6.15.1 There must be substantial towing eyes securely fixed to the main structure of the vehicle, front and rear. Towing eyes to be made from steel wire rope at least 6mm thick.

PUBLISHED COPY

7 Commercial

7.1. Championship Sponsors' branding must also be carried on each car. The position of branding to be carried on cars and clothing will be specified the Championship Branding Guide which may be varied from time to time.

7.2. Two sets of Championship sponsors decals will be provided for the season. Any additional decals required may need to be purchased.

7.3. The organisers reserve the right to refuse the start of any competitor not carrying the correctly positioned decals, vehicles must present at scrutineering in a ready to race condition with branding in place as per the championship branding guide.

Appendix 1

General Information

The ERX technical regulation is linked to the "Projekt E" FIA International Series regulation. Apart from the naming, which is different because of trademark reasons, the ERX technical regulation will remain an exact copy of the Projekt E regulation.

8 **Definitions and principles**

8.1 Main regulation principle

The main principle of the ERX technical regulations is to ensure a fair competition and controlled cost. While allowing freedom for individual solutions and development they exclude exotic and expensive technical solutions which may endanger fair and equal competition.

8.2 **ERX Technical Rights Holder ("TRH")**

All Intellectual Property (IP) rights and copyrights of the ERX technical concept including the specific regulations and powertrain kit system are held entirely and solely by Stohl Group GmbH. In protests or appeals regarding the interpretation of the technical rules or their application Stohl Group GmbH will be the technical referent to advise the Stewards and the Parent ASN.

8.3 **Technical rules**

The use of the supplied ERX powertrain kit in its entirety and in full accordance with the ERX -Kit technical manual is compulsory. The rules for the systems not part of the ERX powertrain kit is defined in these regulations. In addition to this regulation text, FIA appendix J Art 251 applies and certain sections of the FIA Appendix J Art. 253, 255 and 279 apply. The list of applicable articles is listed in Appendix 1 of these regulations.

All modifications which are not explicitly allowed by the present regulations are forbidden. An authorised modification may not entail a non-authorised modification.

No driver aids are permitted.

8.4 Developers **of cars complying with ERX Technical Regulations**

Motor sport companies and technicians are eligible to develop and build cars, based on certain mass production road cars in accordance with the basic requirements listed in this regulation.

In order to be eligible to take part in a competition following the ERX technical regulations, each individual car has to carry a ERX specification sheet ("Specification Sheet"), based on a standard generic technical form. Only the TRH is entitled to issue the Specification Sheet to the developer of the car. The developer has to present the first car of a type and all technical solutions no later than 2 weeks before its first competition in order to receive the first Specification Sheet. Updates to the Specification Sheet requiring additional information may be added by the TRH at any time. Developers have to follow such additional request and update their Specification Sheet information and provide such information as soon as possible.

8.5 ERX **Technical Registered Suppliers & Components List**

In order to regulate costs and create equality of supply for all competitors, certain key components will be restricted to those listed in a Registry of Suppliers and Components. This list will be controlled by the TRH. In order for a supplier and product to be registered the registration procedure defined by the TRH must be followed. Any supplier can apply for registration as long as its component accomplishes the defined requirements and the standard application procedure.

PUBLISHED COPY

Main characteristics included in the registration are:
- Assurance of commercial availability to all competitors for a minimum period of time without changes (except to fix reliability and safety issues)
- Assurance to stay within a cost cap defined by the TRH for each component group
- Supply of technical information in order to control technical compliance of components used by competitors
- Limitation of certain technology level/sophistication if required case-by-case and at the sole discretion of the TRH.

Components requiring registration are:
- Dampers
- Brake Calipers
- Brake Discs
- Pedal Box
- Steering Rack
- Steering Servo (Pump, Motor)
- Wheels
- Driver Display
- HV Safety Lights
- HV Cable
- Interior heating system
- Charging Systems

The list of components requiring registration may be updated at any time.

8.6 Exceptions
The TRH reserves the right to refuse to issue a Specification Sheet for cars, developers' solutions, or components if at its sole discretion they are deemed not to comply with the main principle of this regulation, because of safety reasons, or lack of proof of competence to develop and build a safe car. The TRH further reserves the right to issue waivers on request of the respective developers for certain solutions and systems as long as they do not infringe the main principle of this regulation, or under certain conditions.

9 General Guidelines
9.1 Validity
The technical regulations become valid on 01.01.2020.
Changes, amendments, and clarifications will be approved by the Parent ASN, or
Stewards of the Competition and published by Stohl Group GmbH and communicated to all developers by numbered and dated technical bulletins.

9.2 ERX Powertrain Kit
The supplied ERX powertrain kit has to be used in its entirety without any modification. The kit consists of:
- RESS (HV battery system)
- MGUs
- Motor Controllers
- Transmission Fr & Rr
- VCU
- Power Box
- Keypad
- Main Switch System
- Main wiring harness

The following components are sealed. For safety, and with the exception of assembly/service hatches designated for access by developers or teams, these components may not be disassembled, even partly, by anyone else other than the kit supplier:
- RESS (HV Battery System)
- MGU
- Motor Controller
- VCU

PUBLISHED COPY

- Power Box

Any servicing or repair on those components may only be carried out by the kit supplier.

9.3 **Compliance with the regulations**
Competitors are obliged to ensure the compliance of their car(s) with the ERX technical regulation at all times of the competition.

9.4 **Operation conditions**
For safety reasons, the developer or competitor must not operate the powertrain kit outside of the prescribed operation conditions and limits as outlined in the ERX Kit manual. Any accidental operation of the system outside the prescribed limits must be immediately reported to the kit supplier and the system must not be operated again until the kit supplier has approved its continued use.

9.5 **Eligible Base Cars**
Cars must be rigidly closed non-convertible models with a minimum of three doors. Cars must be mass-produced and available on sale through a recognised commercial network.
The primary target are hatchback and crossover cars, other body styles may be accepted upon request.
Minimum outside dimensions (without mirrors) according to official sales brochure: L: 3945 mm
W: 1694 mm H: 1409 mm
Maximum outside dimensions (without Mirrors) according to official sales brochure: L: 4500 mm
W: 1870 mm
H: 1690 mm
Base cars not matching the above criteria may be accepted by and at the sole discretion of the TRH on request if they suit the global concept of the regulation.

9.6 **Retro Fitted Cars**
Developers may use existing rally or rallycross cars, or chassis and retro fit them with the ERX powertrain kit instead of developing a new car. Such cars must comply with the ERX technical regulations. The TRH may adapt the Specification Sheet requirements for retrofitted cars. The developer must request approval by the TRH prior to the car development. Specification Sheets are issued by the TRH at its sole discretion.

10 **Glossary and naming conventions**
10.1 **ERX Technical Developer**
Any entity that has successfully completed the process for an official Specification Sheet for at least one car.

10.2 **Motor Controller**
The unit fed by the RESS direct current, generating the required multi-phase alternating current output to control the MGU

10.3 **OEM**
Original Equipment Manufacturer of the base car.

10.4 **Front Compartment**
Volume housed inside the car’s bodywork in front of and separated by the front bulkhead and below the bonnet.

10.5 **VCU**
Vehicle Control Unit, main electronic control unit, controlling all other sub control units

10.6 **Power Box**
Solid state low voltage power supply control device for most low voltage actuators

10.7 **Production**
Refers to the original OEM base car´s solution/component

PUBLISHED COPY

10.8 **ERX Kit Manual**
Powertrain Kit manual, containing technical instruction and additional information. To be strictly followed by all developers and competitors

10.9 **HV**
High Voltage = any system with voltage above 60V
10.10 Retro Fitted Car
ERX race car which is based on an existing rallycross or rally car or chassis.

11 Complete car

11.1 Materials
If not specifically permitted the following materials may not be used:
Titanium alloy
Magnesium alloy
Ceramics
Composite material is only allowed for:
Ducts
Seats
Small brackets, supports and covers in the cockpit and front compartment (excluding transmission and MGU brackets)
Motor controller brackets
Cockpit parts must be UL94.V0 fire retardant
Underbody protection
Bodywork and wheel arch liners
Centre console, driver interface and dashboard

11.2 Powertrain performance
Maximum mechanical power delivered by all 3 MGUs at any time: 450 kW

11.3 Minimum Weight
The minimum weight of the car, without the driver or their equipment is 1440 kg
The minimum weight of the car including driver and their equipment is 1540 kg the weight of the car is measured with the driver on board wearing their full racing apparel, and with the fluids remaining at the moment at which the measurement is taken.

11.4 Minimum ground clearance
The entire RESS protection plate, the front and rear underbody protection, the entire body shell, and all other solid parts of the car which are not part of the moving suspension system or the bodywork have to respect a minimum clearance of 100mm to the ground at any time of the competition. The measurement may be checked at the starting grid, weight check area or any other designated area with tyres inflated to maximum 2.4 bars. Before the competition, the various official measurement areas will be designated, and the teams can verify their car's conformity. The measurement device is a solid steel cylinder with a diameter of 100mm and a length of 100mm. This cylinder has to clear all above-mentioned elements at any given position.

11.5 Ballast
Ballast is permitted in accordance with FIA art. 279, however it needs to be fitted in safe distance from the RESS. Installation in the front compartment, attached to the bodyshell is permitted.

12 Body
12.1 Dimensions
The length of the car has to remain as the production car within a tolerance of +/- 10mm.
The overhang of the production car must be respected with in a tolerance of +/- 10mm. The width of the car measured at the fenders can be increased by 150mm based on the width of the production car at the fender within a tolerance of + 5mm. If the production car has a different width at the front and rear fenders, the higher value is applicable for both axles.
Irrespective of the production car width, the maximum width of the race car may not exceed 1950 mm.

PUBLISHED COPY

12.2 **Bodyshell**
The weight of the bare unmodified unpainted production car bodyshell must be listed in the Specification Sheet. All modifications must be documented in the Specification Sheet.

Compulsory modifications:
- Installation of a safety cage complying with FIA Appendix J Article 253.
- Installation of complete ERX powertrain kit as detailed in the supplied installation manual.

Allowed additional modifications:
- Strengthening, in accordance with Article 255-5.7.1
- Removal of unused supports, each modification has to be listed in the Specification Sheet
- Local body modification for rear transmission/MGU installation according to the kit installation manual
- Anti-roll bar system
- Pedal box
- Driver seat and seatbelt, complying with FIA Appendix J Article 253
- Fitting of the cooling system including lines, wiring system, HV power lines, brake lines, and extinguisher lines
- Ballast fixation
- Wheel arches
- Cutouts for driveshaft clearance
- Rear suspension system in accordance with DWG 5.2-1
- Underbody protection
- Mounting of permitted additional components

DWG 5.2-1

Reference plane definition:
- The reference plane is a plane parallel to the ground, passing through the lowest point of the original bodyshell floor, so that no remaining part of the original bodyshell and the race car bodyshell is situated below this plane according to DWG 5.2-2.

DWG 5.2-2

12.3 **Underbody and underfloor protection**
The fitting of underbody protections is authorised provided that these really are protections which respect the ground clearance, which are removable, and which are designed exclusively and specifically in order to protect the following parts: MGUs, RESS, radiators, suspension, transmission system, cooling system.
The underbody protections listed below are compulsory and have to stay within the listed limitations, but at least have to cover and protect all HV components. (they may only protect technical components and must not be used to create a flat floor).
Front:
Aluminium, minimum 2 mm thick. Steel, minimum 1mm thick. Composite, minimum 2mm thick. Maximum weight of 20 kg Centre/RESS:
Aluminium, minimum 4mm thick. Steel, minimum 3mm thick. Maximum weight of 25 kg
Position of lowest edge not lower than “Body reference plane” see DWG 5.2-2
Gap filling structure according to ERX Kit Manual between plate and RESS compulsory the entire RESS has to be covered by the centre or a combination of the centre, front and rear underbody protection plates. In this area (underneath the RESS) the minimum material thickness for the centre/RESS protection has to be respected.
Rear:
Aluminium, minimum 2 mm thick. Steel, minimum 1mm thick. Composite, minimum 2mm thick. Maximum weight of 20 kg

PUBLISHED COPY

An additional underfloor protection for the driver compartment floor from composite resembling the floor shape and a maximum thickness of 4 mm is permitted.
It is permitted to include parts of the front underbody protection plate to replace the centre underbody protection plate. The total combined weight front & centre has to remain under 45 kg.
It is permitted to include parts of the rear underbody protection plate to the centre underbody protection plate. The total combined weight rear & centre has to remain under 45 kg.
The total weight of all 3 underbody protection plates must be below 65 kg.

12.4 **Bodywork**
The production car's bodywork has to remain unchanged except for parts listed below. The original split lines have to be kept except for the headlight and rear light covers.

- Front bumper, free design but respecting the production shape, requires approval, no removable elements allowed, no dive plates, canards etc.

Additional openings allowed to a maximum surface of 3000cm2. The production front bumper mounting bar may be replaced by a single tube with a maximum dimension of 50x2 mm. The new bumper mounting bar, in case used, must be fixed by a maximum of 2 fixation turrets. Its ends must remain unsupported.

- Bonnet

Outside shape has to remain original. Inner Shape free. Openings are allowed with maximum 1100cm2. Trims can be fitted to the openings with a maximum height of 50mm. Fixings can be changed to motorsport fasteners.

- Front fenders

Free design, no removable elements, no significant aerodynamic function allowed, no openings allowed. Upper half of the wheels must be covered when seen from the top and from behind. Mudflaps are compulsory

- Side sill covers

The production car parts may be removed. New covers may be added

- Rear fenders

Free design, no removable elements, no significant aerodynamic function allowed, no openings allowed. Upper half of the wheels must be covered when seen from the top and from behind. Mudflaps are compulsory

- Rear bumper

Free design based on the production shape, requires approval, no removable elements allowed, no significant aerodynamic function. May be shortened compared to the original shape by maximum 100mm measured from lowest part of the production part in positive Z-direction. Wheel to wheel contact must be avoided by covering the rear wheels sufficiently when looking from behind the car.

- Tailgate

Outside shape must remain original. Inner Shape free. Fixings can be changed to motorsport fasteners.

- Driver's door

The original part with the original side impact protection must be used

- Passenger's door

Outside shape must remain original. Inner Shape free.

- Driver's side rear door

The original part with the original side impact protection must be used
Modification in wheel arch area permitted to clear the wheel (design free as per the fender). Material of the modification is free.

- Passenger's side rear door

Outside shape must remain original. Inner Shape free. Modification in wheel arch area permitted to clear the wheel (design free as per the fender). Material of the modification is free

- Additional Rear Aerodynamic device

Permitted, in accordance with FIA Art. 279, but must not be adjustable.

- Windscreen lower trim

The shape must be as on the production car. Material free.

- Mudflaps

PUBLISHED COPY

Compulsory, 4mm thickness, not more than 10cm from ground and have to cover the complete wheel width when looked at from the back.
- Wheel housing liners Free.

12.5 **Glazing**

The Windscreen can be made from polycarbonate or PMMA with a min thickness of 4.75mm. The production car laminated glass windscreen is also allowed. Production or aftermarket laminated road certified glass windscreens with heating function are also permitted.
All side and rear screens must be made from polycarbonate or PMMA and resemble the shape of the original item. Minimum thickness: 4.75mm for doors. 2mm for remaining the screens on all side doors (two or four) must be removable without tools.
Removal of the door window lifters is permitted. The windows may fix in the closed position.

12.6 **Wiper/washer system**
A functioning wiper/washer system has to be in place. The system is free, but the motor has to come from a mass-produced road car.
Washer tank must have a maximum capacity of 2 litres. It´s location is free
.
12.7 **Rear view mirrors**
There must be two external mirrors with a minimum surface area 9 square cm.
Design free. No significant aerodynamic function.

12.8 **External lights**
The production external lights may be replaced by covers resembling the original outer shape. These covers may be integrated into other bodywork parts.

12.9 **Interior & safety systems Compulsory:**
- Application of head protection padding in compliance with FIA Appendix J Article 253-8.3.5
- Installation of driver racing seat according to FIA Appendix J Article 253
- Installation of window net according to FIA Appendix J Article 253
- Driver's seat position

The driver's seat may not be less than 10mm from any part of the RESS casing.
- Seatbelts must be according to FIA 8853/98 standard and have six attachment points in accordance with FIA Appendix J Article 253-7.2
- An extinguisher system according to the FIA appendix J Art. 253 must be installed. This system must use 3M Novec or equivalent extinguishing agent.
- All original seats must be removed.

Permitted modifications:
- Original dashboard can be replaced by new part with same shape. Shortening on bottom for serviceability and cluster cover for driver visibility permitted. Refer to FIA App. J Art. 279 10.1.3 Drawing 279-6 for shortening of bottom area. - Removal of all trims and covers inside the car permitted

13 **Suspension**
13.1 **General**
Double wishbone and MacPherson suspension systems are permitted. Production car wheelbase must be retained with a tolerance of +/- 1%
The use of composite material is forbidden, except for protection or ducts.
13.2 Subframes, front and rear
Must be made from steel. Free design.
Complete subframe minimum weight: 12 kg; Maximum weight: 25 kg

13.3 **Dampers & springs**
Maximum four-way adjustable. Inertial systems prohibited. Roller bearings prohibited.
Only steel coil springs are permitted. Helper Springs are permitted. No hydraulic spring
seat adjusters. No active systems. No electric adjustment systems. No adjustment from the cockpit. No interconnection of the damping systems.

PUBLISHED COPY

13.4 **Uprights, front and rear**
All four bare uprights have to be identical and interchangeable.
For MacPherson:
The minimum weight of a bare upright is 5kg. It must be made either from aluminium or steel.
The minimum weight of the fully equipped hub carrier, excluding the brake system is 10kg.
For double wishbone:
The minimum weight of a bare upright is 3kg. It must be made either from aluminium or steel.
The minimum weight of the fully equipped hub carrier, excluding the brake system is 8kg.
The maximum diameter for wheel bearings is 100mm. Only commercially available bearings are permitted.
The hub design is free, however has to contain a five-bolt wheel fixing system.

13.5 **Suspension links**
Must be made from steel.
For MacPherson:
Minimum weight of all suspension arms per corner including tie rod ends, toe links and bearings: 3kg
For double wishbone:
Minimum weight of all suspension arms per corner including tie rod ends, toe links and bearings: 5kg

13.6 **Anti-roll bars**
Mechanical systems only. Only simple tube style bars. No active systems or adjustability from the cockpit.

13.7 **Wheels & tyres:**
Maximum diameter: 18x9”
Aluminium and Magnesium material is permitted. Minimum weight: 7.5 kg Maximum tire width, measured at two bars: 260mm.
Permissible tyres are shown in rallycrossbrx.com

14 **Brakes**
14.1 **General**
Free. Brake disc material must be iron based. Liquid cooling prohibited.
Hydraulic handbrake is permitted. Brake balance adjustment is free but may not be automated by any means and has to be purely mechanical and manually operated by the driver.

15 **Steering**
15.1 **General**
Free. Power steering system requires certification. The steering column must retain the production car energy absorbing device.
Commercially available motorsport proven quick release system for the steering wheel is compulsory.

16 **Drivetrain**
16.1 **General**
The transmission as delivered with the ERX Kit must be used without modifications except:
- Differential ramps may be chosen from ERX Kit options catalogue
- Preload and friction face quantity setup may be changed
- Breather catch tank is free
- Adaptor plate and adaptor shaft between MGU and transmission is free, but its sole purpose is to fix and connect the MGU to the transmission. No other function is permitted. The adaptor plate must be made from Aluminium.

The gear ratio setup as delivered by the kit supplier must not be changed.
16.2 Installation
Front transmission on the front axle, must be fitted in the front compartment
Rear transmission on the rear axle, must be fitted in the designated area described in the ERX Kit installation manual.

PUBLISHED COPY

16.3 **Driveshafts**
Driveshafts are free excluding the inner tripod joints (from supplier kit).
The shaft cross section must be circular. Only solid bars, no tubes allowed.
16.4 Parking Lock System
At least one axle must have a parking lock mechanism fitted to the transmission. The design is free and may also be electrically activated. The driver must be able to activate the parking lock while seated in the car in racing condition. The system must have a sensor (digital switch).

17 **MGU**
17.1 **General**
Two options are allowed:
1) ERX MGU delivered with the ERX powertrain kit
2) OEM mass production road car MGU
It is not permitted to mix options one and two.

In order to use option 2) a developer must complete following procedure:
- The developer must contact the TRH to request the use of the specific MGU including providing global technical information about the unit.
- The developer must provide written permission from the OEM permitting the use of the respective MGU model.
- The TRH issues a MGU specific specification sheet extension
- Definition of a MGU specific mechanical integration package which has to be used without modification by the developer for the specific MGU

The procedure as defined by the TRH must be followed. Full details about the procedure will be supplied by TRH at the start of the application process, can vary slightly depending on the chosen MGU and may be subject to change at any time.

17.2 **Modifications**
No modifications allowed to any MGU (ERX, or OEM) apart from modifications listed in the ERX Kit manual, or OEM MGU specific extension to the Specification Sheet issued by the TRH.

17.2 **Installation**
One MGU on the front axle, must be fitted in the front compartment

Two MGUs on the rear Axle, must be fitted in designated area as defined in the ERX Kit Manual.

17.3 **Cooling system**
Free, but must be fluid to air heat exchanger, no chillers allowed. Instructions from the Projekt Kit manual must be followed without exception. The radiator core must have a simple rectangular shape (no complex shapes with curvatures etc.). Airducts permitted up and downstream. Fans permitted maximum distance from radiator surface facing to the fan and the last part of the fan: 300mm. The radiators must not be located in the cockpit.
Only the external conditioning and cooling devices permitted in the ERX Kit manual may be used during the Competition, and only in full accordance with the ERX Kit Manual. If cooling lines pass through the cockpit, they must have leak-proof covers.

18 **Motor controllers**
18.1 **General**
Only the motor controllers delivered with the ERX kit may be used. No modifications allowed.
Permitted locations:
- front compartment
- behind the main roll bar

18.2 **Cooling system**
Free, but must be fluid to air heat exchanger, no chillers allowed. Instructions from the Kit manual must be followed without exceptions. The radiator core must have a simple rectangular shape (no complex shapes with curvatures etc.). Airducts permitted up and downstream. The maximum distance between

PUBLISHED COPY

radiator surface facing the fan and the rearmost part of the fan (furthest away from the radiator face) is 300mm. The radiator must not be located in the cockpit.
Only the external conditioning and cooling devices permitted in the E ERX Kit manual may be used during the Competition, and only in full accordance with the ERX Kit Manual. Cooling lines are not permitted in the cockpit, except very close to the Controllers in which case they must have leak-proof covers.
Lines for a cockpit heater are permitted.

19 HV system

19.1 General

Other than the components delivered with the ERX kit and listed below, no additional components can be added to the HV system:

- RESS
- Motor Controller - MGU
- DC-DC Converter

An optional Charging interface may be added but must be supplied by the kit supplier and installed in accordance with the ERX Kit Manual. IP55 class is the minimum requirement for all HV parts.

19.2 HV cabling

Only ERX registered HV cable may be used.
All HV cables and connections must be situated at least 200 mm above ground level and at least 100mm above any underbody protection plates at any times. They must be kept at a safe distance from any moving parts ensuring no contact even in case of minor damage to the car's structure in this area.
The connectors and lugs supplied with the kit must be used according to the ERX Kit manual. The HV cables must be continuous and must not have any interruptions between the connectors of:

- RESS and Motor Controllers
- RESS and DC-DC Converter
- Motor Controllers and MGU
- RESS and Charging Interface

DC cables must be labelled clearly, visibly, and permanently according to the polarity (positive [+] and negative [-]) at both ends.
AC cables must be labelled clearly, visibly, and permanently according their function (U, V, W) at both ends.
If the HV cables pass through a bulkhead, the use of a bulkhead passage element is compulsory and must be either commercially available industrial cable glands, or at least fulfil following requirements:

- Each cable must be surrounded by a pass-through device made from one single piece of hard plastic surrounding the cable (PVC, POM-C or similar)
- The device wall thickness must not be less than 3mm
- The protection area of the cable must have at least a length of 5mm on each side of the bulkhead
- To avoid any damage by vibration the device must be bolted on the bulkhead by a minimum of two M6 screws.
- The edges in contact with the cable sheath must have a min radius of 3mm
- A maximum number of three cables can pass through one device but each cable must have its own dedicated circular passage in the device.
- The cable(s) can be glued or sealed in the device.

DWG 12.2-1

20 E/E system (Electric / Electronic)

20.1 General

With the exception of items listed below, only the electric / electronic units which are supplied with the powertrain Kit may be used: - Driver Display

- Team Data Logger must not have integrated GPS
- Driver Interface (Steering Buttons)
- Sensors according to sensor list 13.2-L1
- 12V Battery
- Standalone Video System; may include GPS Sensor

PUBLISHED COPY

- Rain light including switch & brake lights
- Power steering system
- Interior heating system
- Window heating
- Safety lights
- Coolant pumps
- Fans
- Radio system
- Extinguisher system
- Lap beacon
- Wipers
- Washer pump
- Horn derived from a road car

For safety reasons, during an event, the competitors must allow officially assigned technicians access to any electric control units on their request.

20.2 **Permitted additional sensor and switches list (In addition to ERX kit)**

- Accelerator Pedal Position (QTY 2)
- Brake pedal position (QTY 1)
- Coolant temperature (QTY 4)
- Coolant pressure (QTY 4)
- Ambient air temperature (QTY 1)
- Ambient air pressure (QTY 1)
- Brake pressure (QTY 3)
- Handbrake switch (QTY 1)
- Steering angle (QTY 1) - Accelerometer (QTY 3)
- Beacon / Lap Marker (QTY 1)
- Driver buttons (QTY 12)
- Driver rotary switches (QTY 2)
- GPS Sensor (QTY 2)

20.3 **12V Battery**

Must be commercially available. Maximum capacity of 30 Ah. Maximum voltage: 15V Must be positioned in the front compartment. If Li-Ion technology is used, the developer hast to consider safety against charging a deep-discharged battery.

20.4 **VCU**

Only the ERX kit supplied VCU, and software is permitted. Developers have limited access in order to calibrate and adjust certain powertrain parameters solely for drivability and driver performance. Developers also have the possibility to setup their specific logging system. The firmware on all VCUs is identical, locked and can be controlled through the integral scrutineering function by scrutineers with the sole need for a communication cable and the basic software, provided by the kit supplier.
Updates of the firmware will be published by the kit supplier and supplied to the developers.

20.5 **Wiring Harness**

The base wiring harness supplied as part of the kit must be used in its entirety without modification except as specifically permitted. The CAN communication and main switch system may not be modified. The additional car specific wiring harness is free.

20.6 Horn

For paddock safety, all cars must be equipped with a signal horn derived from a road car. The driver must be able to activate the horn when seated in the car

PUBLISHED COPY

Appendix 1 – List of applicable FIA regulation articles

Art. 253	18.4.4.1			Art. 255		Art. 279
1	18.4.4.2 a-f			5.7.1		8.4
3.1	18.5			5.7.2.5		8.5
3.2	18.7 a-d			5.7.3.1		9.3.1
4	18.8 a-b			5.7.3.5		10.2.17 Except adjustability
5	18.9			5.7.3.7		10.3.1
6.1.2	18.10			5.7.3.9		10.3.2
6.1.3	18.11			5.7.3.11		10.3.4
6.2	18.12			5.8.2		10.3.6
7.2.2	18.13			5.8.3		10.3.7
7.2.3	18.15					10.3.12
7.2.4	18.16					10.3.16
7.2.5	18.17 a-d					10.3.18
8	18.17 f					11.5
9	18.18					
10	18.19					
11.2	18.20 b-c					
16	18.20 e-f					
17	18.20 j					
18.1 a-e	18.22 a					
18.2	18.22 c-e					
18.4.1 d-j	18.22 i-j					
18.4.2	18.23					

PUBLISHED COPY