



Scottish MRC XR2 Championship 2009

1. SPORTING REGULATIONS GENERAL

1.1 TITLE & JURISDICTION:

The Scottish MRC XR2 Championship 2009 is organised and administered by the Scottish Motor Racing Club (SMRC) in accordance with the General Regulations of the Royal Automobile Club Motor Sports Association (MSA) (incorporating the provisions of the International Sporting Code of the FIA) and these Championship Regulations.

MSA Championship Permit Number: **CHR2009/108**
Race Status: National B.
MSA Championship Grade :C.

1.2. OFFICIALS: *(see appendix for contact information)*

1.2.1. Co-ordinator: C Edwards

1.2.2. Eligibility Scrutineer: W G Greig

1.2.3. Championship Stewards: Will be comprised of a panel of any three of the following: Walter Robertson, Sandy Denham, Douglas Lamb, Ken Laidlaw, Bernard Buss and David Swinton

1.3. COMPETITOR ELIGIBILITY:

1.3.1. Entrants must be in possession of valid **2009** MSA Entrants Licences.

1.3.2. Drivers and Entrant/Drivers must be fully paid up valid RACING membership card holding members of the SMRC, or one of the following BRSCC, BRDC, BARC, DDMC, HSCC, Lothian CC, MGCC, 500 MOTOR CLUB OF IRELAND, 750 MC, VSCC and be registered for the Championship. Drivers must be in possession of a valid Competition (Racing) National B STATUS Licence (minimum).

1.3.3. All necessary documentation must be presented for checking at all rounds when signing-on.

1.4. REGISTRATION:

1.4.1. All drivers register automatically as competitors for the championship by returning the Entry Form with the Entry fee to the SMRC or organising club prior to the Final Closing date for the first round being entered.

Only drivers in their 1st or 2nd season of car racing may register for the Newcomers class and must use the registration form in the 2009 standing regulations returning it to the Competition Secretary. Points will not be awarded retrospectively.

1.4.2. The Registration is free

1.4.3. Registrations will be accepted from 1st January 2009 until the Closing Dates for entries for the last round of the championship concerned. Cars will be renumbered for 2009.

1.4.4. Registration numbers will be the permanent Competition numbers for the Championship.

1.5. CHAMPIONSHIP ROUNDS:

The Scottish MRC XR2 Championship will be contested over 14 rounds with all scores counting, as follows:

Date	Venue	Round	Organising Club
April 26th	Knockhill	1 and 2	SMRC
May 16 / 17	Croft	3 and 4	DDMC
May 31st	Knockhill	5 and 6	SMRC
June 28th	Knockhill	7 and 8	SMRC
Sept 5/6	Knockhill (GT Cup)	9 and 10	SMRC
Sept 26th	Knockhill (Sat)	11 and 12	SMRC
October 18th	Knockhill	13 and 14	SMRC

1.6. SCORING:

1.6.1. **Points will be awarded to XR2 Competitors listed as classified finishers in the Final Results per round as follows: -**

Overall Championship: 25 - 20 - 16 - 14 - 12 - 10 - 9 - 8 - 7 - 6 - 5 - 4 - 3 - 2 - 1.

Plus bonus points awarded to any competitor 1 point for the driver(s) setting the fastest lap in the race, and 1 point for a competitor(s) setting a new lap record during the race.

IN ADDITION THE MEETING NOT AT KNOCKHILL WILL CARRY A BONUS OF 10 POINTS IN BOTH THE MAIN CHAMPIONSHIP AND THE NEWCOMERS CUP TO ALL DRIVERS ENTERING THE XR2 RACES AND TAKING PART IN PRACTICE.

Where there are three or less registered competitors starting a round in any Championship Class, points will be awarded to Championship Class registered finishers as follows.

1st - 12, 2nd - 10, 3rd - 8.

ST CUP Class - Fiesta ST models complying with 2009 BRSCC Ford Fiesta Challenge regulations. They do not score points in the XR2 championship and will start from a separate grid to the rear of the main grid –with a delay – in every race.

This class will only score separate points in the ST Cup and all 14 rounds count.

ST Cup points per round : 25 - 20 - 16 - 14 - 12 - 10 - 9 - 8 - 7 - 6 - 5 - 4 - 3 - 2 - 1.

Where there are three or less registered competitors starting the ST Class per
Scottish MRC XR Championship 2009

round, points will be awarded according to Championship Class finishing order in the final results as follows.

1st - 12 , 2nd - 10, 3rd - 8.

No Bonus points will be awarded in the ST Cup

IN ADDITION THE MEETING NOT AT KNOCKHILL WILL HAVE 10 POINTS AWARDED TO ALL ST DRIVERS ENTERING THE XR2 RACES AND TAKING PART IN PRACTICE.

NEWCOMERS CUP

A trophy will be presented to the **XR2** Newcomer driver who achieves the highest finishing **XR2** position at each round in the Championship.

Only **XR2** drivers competing in the **Scottish MRC XR2 Championship** may register with the SMRC Competition Secretary for the Newcomers Cup. A Newcomer is defined as a driver in his or her first or second season of car circuit racing. **A season is a calendar year.** Previous competition experience in other forms of motorsport will not rule drivers ineligible for this class. (this includes karting, rallying, motorcycle racing etc).

Registration is open from 1st January **2009** up until the last meeting of the season. No points will be awarded in retrospect. Registration is free.

The Newcomers registration form for XR2 drivers is in the SMRC Standing Regulations, it must be sent to the SMRC Competition Secretary prior to scoring points.

This competition will be run with the main championship over **14** rounds with all scores counting. Scoring will be as the main championship.

1st - 25, 2nd - 20, 3rd - 16, 4th - 14, 5th - 12, 6th 10, 7th - 9, 8th - 8, 9th - 7, 10th – 6, 11th – 5, 12th – 4, 13th – 3, 14th – 2, 15th – 1

Where there are three or less registered competitors starting the Class per round, points will be awarded according to Championship Class finishing order in the final results as follows.

1st - 12 , 2nd - 10, 3rd - 8.

No Bonus points will be awarded in the XR2 Newcomers Cup

1.6.2. The totals from all qualifying rounds held will determine the final championship points and positions, unless penalties have been applied under GR C(d).39.

1.6.3. Resolving ties.

Ties will be resolved using the formula in G11 in the **2009** MSA Yearbook

1.7. AWARDS

1.7.1. All awards are to be provided by the SMRC

1.7.2 Per Round: XR2s

Trophies to the 1st, 2nd and 3rd and highest ^{finishing} Newcomer

There may be other awards added.

ST CUP class trophy 1st in class

- 1.7.3. Championship: **XR2s**
Winner Trophy and £800,
2nd £700, 3rd £600, 4th £400, 5th £300, 6th £200

Winner Newcomers Cup, Trophy and £300

ST Cup - Trophy

- 1.7.4 Bonuses:
The Organisers reserve the right to arrange and introduce additional bonus awards during the championship.
- 1.7.5. Presentations:
Trophies are to be provided for presentation at the end of each race or at an end of the meeting presentation ceremony.
- 1.7.6. Entertainment Tax liability:
In accordance with current Government legislation, the Organisers of each round are legally obliged to withhold tax at the current basic rate on all payments to non-UK resident sportsmen/sportswomen.
That is, those persons who do not have a normal permanent residence in the U.K. The U.K. does not include the Isle of Man, Channel Islands or Eire. This means that as the organiser, the SMRC is required to deduct tax at the current rate applicable from any such payments they may make to non-U.K. residents.
Under certain circumstances, it is possible for competitors to enter into an agreement with the Inland Revenue 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:- **The Inland Revenue, Foreign Entertainers Unit, Centre for Non-Residents, St Johns House, Merton Road, Merseyside L69 9BB Tel 0151 472 6488 Fax 0151 472 6483**
- 1.7.7. Title to all Trophies:

In the event of any Provisional Results or Championship Tables being revised after any provisional presentations and such revisions affect the distribution of any awards, the Competitors concerned must return such awards to the SMRC in good condition within 7 days.

2. SPORTING REGULATIONS JUDICIAL PROCEDURES

2.1. ROUNDS:

In accordance with section (C(d)) of the **2009** MSA Yearbook.

2.2. CHAMPIONSHIP

In accordance with the Section (C(d)) of the **2009** MSA Yearbook. Drivers excluded from results for sporting infringements may not use that (those) event(s) as discarded rounds for the purpose of overall championship placings.

3. SPORTING REGULATIONS CHAMPIONSHIP RACE MEETINGS & RACE PROCEDURES

3.1. ENTRIES:

- 3.1.1. Competitors are responsible for sending in correct and complete entries with the correct entry fees prior to the entry selection dates, which shall be 12 days before each SMRC round or as per the closing date stated on entry forms for non SMRC organised meetings.
- 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. The date of receipt for acceptance of entry purposes shall be the date on which the Secretary of the Meeting 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 Secretary of the Meeting in writing. If Driver/Vehicle changes are made after publication of Entry Lists with Final Instructions the Competitor concerned must apply for approval of acceptance by the Stewards of the Meeting BEFORE Signing-on.
- 3.1.4. The maximum entry fee, for SMRC members at SMRC Knockhill meetings will be £220.00 per two 10 lap races at Knockhill. Non SMRC Members £240.00

SMRC Competition Secretary may amend these fees which will be confirmed in each meetings supplementary regulations.

NOTE: The entry fees for races organised by clubs other than the SMRC may vary; this includes the races at Croft.

All other variations to entry fees will be stipulated in the Supplementary Regulations / entry forms for each event. Knockhill entry fee includes TV levy.

- 3.1.5. In the event of any rounds being oversubscribed the Organising Clubs, in liaison with the **Co-ordinator/Competition Secretary may at their discretion** run Qualification Races, their format to be covered in final instructions for meetings.
- 3.1.6. Reserves are to be nominated on the Final List of Entries published with Final Instructions or Amendment Sheet Bulletins. All Reserves will practice and replace withdrawn or retired entries in Reserve Number order irrespective of class. If Reserves are given Grid Places prior to issue of the first Grid Sheets for any round, the times set in practice shall determine their grid positions. If Reserves are given places after publication of the grid sheet and prior to cars being collected in the Official "Assembly Areas" they will be placed at the rear of the Grid and be started without any time delay. Otherwise, they will be held in the Pitlane and be released to start the race after the last car to start the GREEN FLAG LAP or last car to take the start has passed the startline or pitlane exit, whichever is the later. Such approval to start MUST be obtained from the Clerk of the Course.

3.2. BRIEFINGS:

Organisers should notify competitors of the times and locations for all briefings in the Final Instructions for all meetings. Competitors must attend all briefings.

3.3. PRACTICE:

The minimum period of practice to be provided is to be as specified in the MSA Regulations in respect of circuit lengths.

Should any Practice Session be disrupted the Clerk of the Course shall not be obliged to resume the session or re-run sessions to achieve the championship criteria, and the decision of the Clerk of the Course shall be final.

3.4. QUALIFICATION:

Each driver should complete a minimum of 3 laps practice, in the car to be raced, in the correct practice session in order to qualify for a grid position based on practice times. Failing that, he or she must seek permission to practice out of session or satisfy the Clerk of the Course that the requirements of GR G.15 are met. The Clerk of the Course shall have the right to exclude any driver whose practice times or driving are considered to be unsatisfactory (GR G.15).

Cars in the ST Cup Class will start from a separate grid to the rear of the XR2 grid with a time delay.

3.5. RACES:

The standard minimum scheduled distance shall be 10 miles whenever practicable, but should any race distance be reduced at the discretion of the Clerk of the Course or Stewards of the Meeting it shall still count as a full points scoring round.

3.6. STARTS :

3.6.1. All race start countdowns are to have a minimum elapsed period of 3 minutes from the time all cars are released to form up on the grid to the start of the Green Flag Lap(s) in the formation as specified on the Track Licence for each circuit.

3.6.2. The minimum Countdown procedures shall be:-

Standing Starts:

A minimum countdown starting at 3 minute may be adopted

2 minute to start of Green Flag lap – Clear Grid Warning/Grid Closed

1 minute to start of Green Flag lap - Start Engines/Clear Grid.

30 Seconds - Visible and audible warnings for the start of Green Flag lap.

3.6.3. Any cars removed from the grid after the 1 minute stage or driven into pits on Green Flag Lap shall be held in the pitlane and may start the race after the last car to take the start from the grid has passed the startline or pitlane exit, whichever is the later.

3.6.4. Any drivers unable to start the Green Flag/Pace lap or start are required to indicate their situation as per GR G.53. Any drivers unable to maintain grid positions on the Green Flag Lap to the extent that ALL other cars are ahead of them, may complete the Green Flag lap. However they MUST remain at the rear of the last row of the grid but ahead of any cars to be started with a time delay.

3.6.5 Excessive weaving to warm-up tyres - using more than 50% of the track width, and falling back in order to accelerate and practice starts, is prohibited.

3.6.6. A five second board will be used to indicate that the grid is complete. The red light starting sequence will begin five seconds after the board is withdrawn. In the event of any starting lights failure the Starter will revert to the use of the National Flag.

3.7. RACE STOPS.

Any race can be stopped at the sole discretion of the Clerk of the Course by waving the Red Flag at the Start / Finish line.

3.7.1. Should the need arise to stop any race, RED LIGHTS will be switched on at the Startline and RED FLAGS will be displayed at the Start line and at all Marshals Signalling Points around the Circuit.

This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and to return to the starting grid area which will automatically become a Parc Ferme area.

- 3.7.2. Case A – Less than two laps completed by Race Leader
The race will be null and void **and will be declared ‘ No Contest’**. The race will restart from original grid positions. Competitors unable to take the restart may be replaced by reserves who will start from the back of the grid in reserve order. Gaps on the grid should not be closed up. The length of the restarted race will be determined by the Clerk of the Course.
- 3.7.3. Case B – More than two laps completed by Race Leader **but less than 75%**
The Race will restart from a grid set out by the finishing order of part one, (as per GR G23). The result of the race will be the finishing order at the end of part 2. The length of the restarted race will be determined by the Clerk of the Course.
- 3.7.4 **Any race stopped after the leader has completed 75% of the race distance or duration it shall not be re-started and will be considered to have finished, unless the Clerk of the Course, in consultation with the Stewards of the Meeting, deems it appropriate to restart the race. If not restarted the result will be based on the order crossing the finish line at one lap less than at the time of first showing the Red Flag. Only cars which are under their own power at the showing of the Red Flag will be classified.**

In the interval between stopping and restarting the race cars may return to the pit area for repairs. They may join from the pit road after all other cars have started. Non-runners at the time of stopping can restart from the pit lane, behind those referred to above. No work may be carried out on the grid unless on grounds of safety and with the approval of the scrutineer. The Clerk of the Course may order that the duration of the second part or re-run of any race shall be of a shorter distance than originally scheduled, or may be abandoned altogether (GR G.24).

3.8. RE-SCRUTINY:

All vehicles reported involved in contact incidents during races or practice must be re-presented to the Scrutineers before continuing in the races or practice.

3.9. PITS & PIT LANE SAFETY:

- 3.9.1. Pits.
Entrants must ensure that the MSA, Circuit Management, and Organising Club Safety Regulations are complied with at all times.
- 3.9.2. Pit lane:
The outer lane or lanes are to be kept unobstructed to allow safe passage of cars at all times. The onus shall be on all Drivers to take all due care and drive at minimum speeds in pit lanes.
- 3.9.3. Refuelling:
May only be carried out in accordance with the MSA. Regulations (GR G67-70), Circuit Management Regulations and the SRs or Final Instructions issued for each Circuit or Meeting.
- 3.9.4. Speed Limit
Pit Lane Speed Limit will be 30mph.

- 3.10. 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 pit lane entrance as instructed, comply with any directions given by Marshals or Officials and to keep helmets on and harnesses done up while on the circuit or in the pit lane.
- 3.11. 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.
- 3.12. Transponder Timing
Timing at all events will be by Electronic Competitor Identification Equipment (Transponders). This requires every competing car to be fitted with a transponder giving a unique signal identifying the car and the competitor driving that car.

It is responsibility of each competitor to

- a. Obtain/purchase an approved type/model of transponder.
- b. Securely fit the transponder in the location specified for the type/class of car.
- c. Ensure the transponder is in good working condition for every practice and race
- d. Notify the Secretary of the Meeting of any change of car, driver, class etc.
- e. Replace any transponder damaged, lost or inoperative.

Any competitor starting a practice or a race with an inoperative transponder will not be timed until the defect has been fully rectified or a replacement transponder has been obtained for the duration of the meeting.

Any competitor starting practice using a transponder allocated to another competitor will not be timed until the Secretary of the Meeting has been fully informed in writing of all changes of competitor, class, car etc.

Transponders: Information and advice on approved types of transponders, sources of supply and the required location and fitting of transponders for each class of car, are available to competitors and/or entrants from the Competitions Secretary or SMART Timekeeping (01896 752447)

Approved Transponders

For cars with a reliable 12 volt dc supply:

AMB TranX260 direct powered transponder

This transponder is a sealed unit for direct, permanent fitting in the required location. Attached to it is a 2 meter, high temperature and oil resistant cable for connection to a 12 volt supply, preferable though the car ignition switch.

For cars without a reliable 12 volt dc supply or for competitors wishing to use the same transponder on different cars:

AMB TranX260 rechargeable transponder

This transponder is secured in a bracket permanently fitted in the required location. It must be removed, fully recharged in the charger supplied. and securely refitted in its bracket prior to each meeting,

This type is only recommended where a reliable 12 volt dc supply is not available or the transponder is required to be transferred quickly from car to car, for the same competitor

In exceptional cases AMB TranX160 transponders, commonly used for some karting, may be used but these are not suitable for cars crossing the start/finish line at very high speeds. Any competitor considering using these transponders should have them checked by the timekeepers prior to starting practice.

4. CHAMPIONSHIP RACE PENALTIES:

4.1. INFRINGEMENTS OF TECHNICAL REGULATIONS:

4.1.1. Arising from post practice Scrutineering or Judicial Action:
Minimum Penalty: The provisions of MSA Regulation (C(d)36)

4.1.2. Arising from post race Scrutineering or Judicial Action:
Minimum Penalty: The provisions of MSA Regulations (C(d) 39 (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 (C(d)39(c)).

4.1.3. Additional specific championship penalties:

4.2. INFRINGEMENTS OF NON-TECHNICAL MSA REGULATIONS AND THE SPORTING REGULATIONS ISSUED FOR THE CHAMPIONSHIP:

As per **2009** MSA Judicial Procedure Regulations with the addition of the fact that competitors who are excluded from results for sporting infringements may not use that round as a discarded round for championship purposes.

5. TECHNICAL REGULATIONS:

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it you should work on the principle that you cannot. All competitors are advised to read Section (C(d)39(a) and (b)), (C(b)Technical), G Technical Regulations, The Terminology, (C(c)) and (C(e)) of the **2009** MSA Yearbook.

5.2. GENERAL DESCRIPTION:

The 2009 Scottish MRC XR2 Championship is for competitors competing in **Fiesta XR2** saloon cars. Eligible models are: - Ford Fiesta Mk2 1.6 XR2 CVH pre lean burn carburetor model.

There will a class for Fiesta ST cars complying with BRSCC Fiesta Challenge group N 2009 regulations.

5.3. SAFETY REQUIREMENTS:

5.3.1. All MSA Appendix (C(c)) Safety Criteria Regulations apply as relevant. MSA Yearbook **2009** references: (C(c) Vehicle Categories Covered) (Drawing,- 5) with optional bracing tubes as per Blue Book drawings only and compulsory diagonal strut with upper joint on drivers side, (C(c)45 Four Point), (C(c) Appendix 1 table 56(b), (C(c)72,73), (C(c)53), (C(c)75,76), (C(c)77 to 86), (C(c)87 to 99, (C(c)103 and 104).

Note. It is mandatory that door bars be fitted to the roll cage on both sides of the car

A plumbed in Fire extinguisher system must be fitted. (GR G.130).

5.3.2. If fitted with a sunroof, this must be made of steel and securely fixed in the closed

position by at least two additional fixings.

5.3.3 Towing Eyes must be fitted front and rear in accordance with G99, minimum internal diameter 60mm and painted in a contrasting colour (dayglow red, orange or yellow)

5.4. GENERAL TECHNICAL REQUIREMENTS & EXCEPTIONS:

Fiesta XR2

MSA Yearbook **2009** references: (C(b)6), (C(b) Technical), G Technical Regulations, The Terminology, (C(c)), (C(e)).

5.4.1. Definitions: All references to standard parts and/or material in these regulations shall be interpreted as references to the manufacturers original specification(s) as appearing- on the Ford XR2 Production Car Specification Sheets as appropriate.

5.4.2. All parts must remain as Standard except for the Modification listed. The Modifications Specifically Prohibited are for competitors guidance only.

5.4.3. Unless specifically authorised in these regulations, the use, substitution of, and/or addition of, any parts, material or processes is prohibited, other than welding or repairing material or the fitting, of the manufacturers standard replacement parts, for the sole purpose in every respect of restoring the vehicle to the manufacturers Standard specification or to comply with MSA statutory safety requirements.

5.4.4. Capacity Classes:- A maximum cylinder capacity of 1620.77 cc is permitted and a 1594 cc minimum volume.

5.5 CHASSIS: Standard

5.5.1 Modification Permitted
None

5.6. BODYWORK: GROUP N

5.6.1. Modifications Permitted:

5.6.1.1. Removal of spare wheel and tools.

5.6.1.2. Alternative steering wheel,

5.6.1.3. Non-standard drivers seat.

5.6.1.4. Removal of floor carpets

5.6.1.5. Removal or replacement of passenger seats.

5.6.1.6. Removal of passenger compartment heater.

5.6.1.7. Fuel and brake lines may be routed through the driver compartment subject to provisions of (GR C(c)103 and 104).

5.6.2. Modification Prohibited

5.6.2.1. Removal of standard bumpers and over-riders.

5.6.2.3. Interior trim and instruments: Dash panel and instruments must be as XR2 model and

MUST be complete with all switches, air vents, steering controls, glove box lid, steering column cowl, etc. All side trim panels and doors, rear side and boot area and rear quarter light panels must be fitted.

5.7. ENGINE

5.7.1. Permitted Modifications

5.7.1.1. Baffles in the sump

5.7.1.2. Oil pick-up pipe

5.7.1.3. Fitment of an additional oil cooler within the confines of the bodywork provided this does not entail modification to the bodywork or radiator grill.

5.7.1.4. Removal of coolant thermostat.

5.7.1.5. A standard unmodified air cleaner must be fitted but paper element may be removed. The fitment of the moulded air intake hose (standard Ford) is mandatory. Filter elements do not have to be of Ford Motor Company origin.

5.7.1.6. Make and type of spark plugs.

5.7.2. Prohibited Modifications.

5.7.2.1. Removal, replacement, relocation or modification of the air cleaner housing or intake hose(s).

5.7.2.2. Alteration of the standard quantity of fuel or air reaching the engine except for 5.7.1.5.

5.7.2.3. Substitution or alterations to the standard engine revolution limiter and ignition pack systems.

5.7.2.4. Polishing or reworking of any part(s) including the inlet and exhaust manifolds, the inlet and exhaust tracts and combustion chamber space in the cylinder head.

5.7.2.5. Cylinder bore over standard size (See 5.4.4).

5.7.3. Location - Standard Position

5.7.4. Oil/Water Cooling

Standard except for 5.7.1 to 5.7.1.4. The standard fan cowlings must be fitted.

5.7.5. Induction Systems.

Standard except 5.7.1.5. above. The updated XR2 engine Weber carburetor may be used; whichever is fitted it is permissible to remove the choke butterfly.

The water heated inlet manifold must remain connected, unrestricted and in working order.

5.7.6. Exhaust Systems

Free below the standard exhaust manifold. Cars must comply with GR C(b)22 and C(b)23.

An additional centre support must be fitted to the exhaust system.

5.7.7. Ignition Systems.

Standard except for 5.7.1.6. The ignition vacuum advance/retard mechanisms must be retained, connected & operational.

5.7.7.1. An engine rev limiter may be fitted, the only permitted model is LUMENITION ERL-V, setting is free. If fitted the unit and all associated wiring must be in the engine compartment and easily identifiable.

5.7.7.2. The fitting of a 'SHRICK' test socket is compulsory (see appendix B).

5.7.8. Fuel Delivery Systems.
Standard - except for 5.7.5. above.

5.8. SUSPENSIONS

5.8.1. Permitted Modifications.

5.8.1.1. Vehicles may be modified to Group N except as follows: Hydraulic McPherson strut conforming to attached drawing with respect to tube dimensions. Setting is free. Alternatively the standard XR2 front may be retained. No modifications at all to this strut are permitted. Camber adjustment is not variable with this strut. XR2s must have a minimum ground clearance between the transverse seam on the bulkhead and the ground must not be less than 650mm without the driver on board.

5.8.1.2. Spring and spring trim free

5.8.1.3. Adjustable platforms are permitted (Front only)

5.8.1.4. A "strut brace" may be utilised and consist of a single steel tube bolted-in strut brace between front suspension top mounting points.

5.8.1.5 Rubber suspension bushes may be replaced with uprated polyurethane bushes, and only in the Front Lower Control Arm (inner bush), Tie bar, Rear Anti Roll Bar and Rear Trailing Arm.

5.8.2. Prohibited Modifications.

5.8.2.1. XR2 vehicle dampers/shockers must be hydraulic with single adjustment for bump and rebound NO external reservoir types permitted or rose joints.

5.8.2.2. Alterations to suspension mounting/attachments or type of operation are prohibited except for 5.8.1.4. and 5.8.1.5

5.8.3 Wheelbase/Track must remain Standard.

5.9. TRANSMISSIONS. must remain Standard

5.9. Permitted Modifications.

5.9.1.1. Material and method of fixing of clutch disc lining free.

5.9.1.2. Standard Clutch Pressure Plate may be replaced by RS Pressure Plate 90949950. Clutch disc diameter 200 mm or 220 mm.

5.9.1.3 Gear linkage is free including fitting of quickshift; this must satisfy scrutineers as to its safe operation

5.9.2. Prohibited Modifications.

5.9.2.1. Torque biasing/limited slip differentials.

5.9.2.2. Gear ratios must be in compliance with appropriate Ford Motor Company specification sheets both in terms of ratio and teeth combination.

Gear	Ratio	Teeth
1 st	3.154:1	41:13
2 nd	1.913:1	44:23
3 rd	1.274:1	37:29
4 th	0.951:1	39:41
5 th	0.756:1	34:45
Reverse	3.615:1	47:13

Or, as above except: 3rd 1.281:1/41:32

Final Drive: XR2:- 3.58:1/19:68 or: 3.82:1/17:65

5.9.2.3 Van drive shafts are not permitted; only standard XR2 units should be used.

5.10 ELECTRICS

5.10.1 Permitted Modifications

5.10.1.1 Fitment of master cut-off switches in compliance with GR G120 and C(c)75 and 76).

5.10.1.2 Fitment of additional battery strap and non- metallic covers

5.10.1.3 The headlamp unit may be replaced by a dummy plastic panel provided that the shape and location are identical to the original headlamp unit. All other lights must be retained and in full working order.

5.10.2 Prohibited modifications

5.10.2.1 Modifications which render components inoperative.

5.10.2.2 Alternator, lighting and starter must be standard and fully operational.

5.11. BRAKES.

5.11.1. Permitted Modifications.

5.11.1.1. Disc pad and brake shoe friction material free.

5.11.2. Prohibited modifications.

5.11.2.1 Increase or reduction of friction contact areas.

5.11.2.2 Additional Cooling pipes.

5.12 WHEELS / STEERING

5.12.1. Fiesta XR2

Standard Ford alloy wheel or V82FB 1007 AA Diameter 13 Inches: Rim 6J: Offset (Dim) 108mm from mounting face to inside rim.

5.12.2 Permitted Modifications

None

5.12.3 Prohibited Modifications

5.12.4.1 Wheels other than those specified in 5.12.

5.12.4.2 Wheel spacers of any type

5.13. TYRES

5.13.1 Nominated Manufacturer

KUHMO 175/60HR13 Ecsta V700 K9A compound will be the control tyre for the Championship.

5.13.2 The minimum tread depth shall be 1.6 mm across the full width of each tyre (GR C(b)15)

5.13.3 The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.

5.14. VEHICLE WEIGHT

5.14.1. Definition as per **2009** MSA yearbook, GR C(b)21.

5.14.2. Minimum Weights

XR2 Car weight:- 760 kgs.

The weight including the driver at any time during practice or race should be a minimum of 845 kgs. If ballast is carried it must be identified to the eligibility scrutineer at pre event scrutineering and must be capable of being sealed in position if required (GR C(b)21)

5.15. FUEL TANK/FUEL

5.15.1. Types

Fuel tanks must remain standard however it is permitted for tanks to be coated with 5 mm layer of fiberglass or fireproof material. The filler neck area within the nearside body panel must be sealed.

5.16. SILENCING

5.16.1. Specification

All cars must be road legal and within limits specified by GR C(b)23.

5.17 NUMBERS / DECALS

All cars must be identified by MSA specification numbers displayed in a position acceptable to the Timekeepers (GR C(b)6).

If the car is not trailored it is not permitted to display your racing numbers on the public highway. They must be fully covered or removed (crossing out is insufficient).

5.17.1 Championship sponsors decals must be positioned as instructed, Windscreen strip, decals, doorplate and headlights; and Kumho badges to be sewn on to drivers racing overalls. These decals must be in position before the car is presented for scrutineering. Championship sponsors decals must be present during both practice and race.

SMRC decals must be affixed to both sides of the vehicle.

6 Appendix 1

6.1 Series Contacts - The Scottish XR2 Championship 2009

SMRC

Competition Secretary/ Co-ordinator , Chris Edwards
Birch House, Duncreevie, Perthshire PH2 9PD
tel 01577 830133 e mail c.edwards@smrc-uk.com

Eligibility Scrutineer

Willie Greig
53 Cupar Road
Kingskettle, Fife
KY15 7QD
Tel Evenings 01337 831952

ARDS (Race) training courses and Circuit Testing

Knockhill Racing Circuit
By Dunfermline
Fife
KY12 9TF
01383 723337

Transponders

David Sharp
SMART Timekeeping
01896 752447

MSA

Motor Sports House
Riverside Park
Colnbrook
Slough
SL3 OHG
01753 681736

6.2 Commercials Undertakings

The following commercial undertakings are not subject to the judicial procedures of either the Championship stewards and/or the MSA/MSA.

Enquiries concerning the commercial aspects of the series should be addressed to the series Co-ordinator (see SR7).

The series title and associated logo styles may only be used with prior written approval of the Scottish Motor Racing Club Competition Secretary

Competitors are advised that, unless requested otherwise, their information will be stored in a computer retrieval system and may be used for publicity purposes.

Entry into the series is conditional upon each competitor:

- i) **Providing free of charge to the Organisers advertising places on their cars and clothing as specified.**
- ii) **Accepting without reservation or recourse the surrender of his/her rights (if any) for TV filming and broadcast of footage collated during the series, which may be used at the Series Organisers', Sponsors', and Promoters' discretion.**
- iii) **Complying with the Organisers and Sponsors requirements on podium procedures, including a requirement to wear Challenge Sponsors publicity material in preference to the competitor's own sponsor.**
- iv) **Co-operating with requests for publicity sessions throughout the season.**

All cars must carry the Series Sponsors' decals and panels in the correct locations, without alteration and without interference.

At the start of each event, practice and qualifying, the cars must be clean and in good order. The Organisers reserve the right to forbid cars not meeting this requirement from taking part.

No on-board cameras will be permitted except under the control of the Organisers nominated TV Production Company in respect of material to be transmitted on television.

The Scottish Motor Racing Club has exclusive broadcast, cable, satellite, video and rights to all other mediums to film and record the participation of the Driver, Entrant, Sponsor, and any other team members in the events and activities throughout the series and to licence, assign or otherwise deal with such rights and/or film and recording.

Any competitor advised by the Organisers that they are to carry on-board television cameras, must have the approved series logo on the dashboard, visible to the official on-board camera. The decision for the positioning of this logo rests solely with the Organisers and Promoters. No other publicity material visible to an on-board camera, on the car will be allowed.

Competitors are reminded that no tobacco (or associated product) advertising, either on the car or Drivers is permitted. Additionally any products that are not permitted to be advertised on UK terrestrial television are also prohibited.

No advertising or statement on the car or on the Drivers' race clothing is allowed which may be considered offensive to the Organisers, the Promoters or their Sponsors.

All Drivers required for Podium Presentations at each meeting, should attend without delay. Failure to do so may mean forfeiture of any Championship awards/points at the round.

6.3 Vehicle Presentation – This is important to the profile of the races, its sponsors and its audience. Therefore in considering whether to permit any car to race at any point during the season, the organisers will regard as paramount the presentation of the car. They may exclude any car which they consider may prejudice the reputation of the races or is otherwise unacceptable. This will include where the car is presented at a race event bearing accident damage sustained at a previous event, and which has not been subject to the completion of a proper repair.

6.4 Appendix A XR2 Engine Specification Sheet

XR2 ENGINE SPECIFICATION SHEETS: O.H.C. ONLY

(a)	Carburettor.-	
	Make	Weber
	Type	Twinchoke
	Number on engine	One
	Number of main venturi	Two
	Maximum dia. main venturi	24 (p) 25 (s)
	Maximum dia. of throttle barrels	32 (p) 34 (s)
	Maximum dia. at inlet manifold	34

Carburettor may not be modified except for parts controlling quantity of fuel, and the removal or disability

of the choke mechanism.

(b)	Inlet Manifold: Part number Material Internal finish Dimensions at gasket face Inlet Valve	8ISF 9425 JF or (V84FB9425AA) or (V84FB9425BA) Cast aluminium alloy As cast As sketches below 6088114
(c)	Exhaust Manifold Part Number Material Internal finish Dimensions at gasket face Exhaust Valve	8ISF 9430 CJ Cast Iron As cast As sketches below 6162461
(d)	Cylinder Block Part number Number of cylinders Material Bore Stroke Swept volume Total volume	81SM 6015 CMA or 86SM 6015 BA 4 Cast Iron 79.94/79.98 standard bore + 0.50 re-bore allowance 79.42/79.62 398.7 - 405.19 per cylinder 1594 -1620.77 c.c.

It is permitted to reclaim engine blocks by fitting liners or by boring by 0.5 m.m. i.e. to a maximum dimension for the cylinder bore of 80.48.

(e)	Crankshaft. Part number Material Finish	81SM 6303 CH or 86SM 6303 BAA Cast iron (Nodular) As cast/machined
(f)	Connecting rod: Part number Material Finish Weight	81SM 6200 CB Forged steel As forced 564,5 +/- 6.5 gms
(g)	Flywheel Part number Material	81SM 6375 KE or 86SM 6375 AA Cast iron

No lightening /machining allowed. Minimum weight 6.5 kgs.

(h)	Cylinder Head Part number Material Tract finish Combustion chamber volume Combustion chamber finish	81SM 6090 ARH Die cast aluminium As cast 53.3 - 56.0 c.c. Fully machined
(i)	Camshaft: Part number Material	81SM 6251 LD or LE or 88SM 62512 (6186554) Cast iron

Inlet	Exhaust
s=22.35	21.842
t=16.256+/-	15.748+/-
.04	.04
u=32.512	31.496

The figures above relate to camshaft 81SM 6251 LD or LE. If you choose to use camshaft 88SM 62512 then its specification should match the reference camshaft held by the SMRC.

Duration (In & Ex) 208 degrees Angle between major axis = 134 degrees

Cam profile is defined by determination of lift at various angles. Cam lift in millimeters (dismounted camshaft)

Inlet and exhaust profiles identical

$$O = 6.1 \text{ mm.}$$

Degrees		Degrees	
-5	6.0mm	+5	6.0
-10	5.9mm	+10	5.9
-15	5.6mm	+15	5.6
-30	4.2mm	+30	4.2
-45	2.0mm	+45	2.0
-60	0.2mm	+60	0.3
-75	0	+75	0.1
-90	0	+90	
-105	0	+105	
-120	0	+120	
-130	0	+130	
-150	0	+150	

Standard timing pulleys MUST be used. It is not permitted to use vernier timing pulleys.

Valves:

Inlet valve head diameter	42.0
Wet valve maximum lift (checked with solid lifter)	10.1
Exhaust valve head diameter	37.0
Exhaust valve maximum lift (checked with a solid lifter)	10.1

(k)

Valve Actuation

Valve Users - part number	81SM 6500 D2E
Valve lifters -	Hydraulic
Rockers - part number	81SM 6564 EE
Valve springs - part number	81SM 6513 AE
Number of coils	6
Wire diameter	32.7
Maximum free length	47.2

Piston:

Part number	81SM 6102 DA
Material	Cast aluminium
Number of rings	3
Weight - Piston, pin and 3 rings	506 gms minimum

Where engine block has been reclaimed by re-boring as specified the appropriate oversize pistons and rings may be fitted.

(m) **Compression Ratio - Maximum:**

Head casket - compressed thickness	1.64 m.m. minimum
Head casket - volume allowance	Vg = 8.7 c.c. minimum
Combustion chamber volume in head	Vh = 53.3 c.c. minimum
Piston volume above block face (including allowance down to top ring)	Vb 18 c.c. maximum
Compression Ratio	$\frac{v + l}{Vh + Vg - Vb} = \frac{400}{53 + 8.7 - 18} + 1 = 10.1 \text{ maximum}$

(n) Exhaust manifold heatshield part number - 8ISF 95596AA must be fitted.

SOME OF THE PART NUMBERS LISTED ABOVE MAY BE SUPERSEDED BY THE FORD MOTOR COMPANY, IN THIS EVENT DIRECT REPLACEMENT FORD MOTOR COMPANY PARTS MAY BE USED. IT IS STRONGLY RECOMMENDED THAT YOU OBTAIN PERMISSION IN WRITTING FROM AN ELIGIBILITY SCRUTINEER BEFORE THE FITTING OF ANY SUCH REPLACEMENT PARTS.