

NOVEMBER 2024

RALLY X TECHNICAL REGULATIONS

FC2 2025



RALLY X TECHNICAL REGULATIONS FC2 2025

FC2 GENERAL PRINCIPLES	3-4
FC2 ELIGIBLE CARS	4
FC2 ENGINE	5
FC2 BODYWORK AND DIMENSIONS	6
FC2 WEIGHT	6
FC2 REPAIRS	7
FC2 DATA ACQUISITION	7
FC2 ELECTRICAL SYSTEM	8
FC2 GEARBOX - TRANSMISSION TO THE WHEELS	8
FC2 SUSPENSION AND STEERING	9
FC2 OIL AND WATER SYSTEMS	9
FC2 BRAKES	9
FC2 WHEELS AND TYRES	10
FC2 COCKPIT	11
FC2 FUEL AND LUBRICANTS	11
FC2 SAFETY EQUIPMENT AND DRIVER INSTALLATION	12-13
FC2 ON-BOARD TELEVISION CAMERAS	13
FC2 TIMING TRANSPONDERS	14
FC2 TIRES OR TYRE	14
FC2 WEATHER KIT	14

1. GENERAL PRINCIPLES

1.1. The final text of these Technical Regulations shall be the English version which will be used should any dispute arise as to their interpretation.

1.2. These Technical Regulations are published on 01.01.2025

1.3. The present Technical Regulations will be valid for 1 year from the date above.

1.4. Changes to the Technical Regulations will be published by each series respectively in agreement with Olsbergs MSE and communicated to the participants and SBF by means of technical bulletins.

Changes will become applicable on the dates indicated by each series in the relevant technical bulletin.

1.5. All FC2 cars must comply with these regulations in their entirety at all times during an Event and during official tests described in the Rally X and or Swedish Championship Sporting Regulations.

1.6. All cars must be built and operated in accordance with the relevant sections of the latest FC2 Users Manuals or technical Bulletin listed on www.firstcorner.se

1.7. Unless otherwise stated in these regulations, all cars, car parts, components assemblies and systems must remain as supplied by the supplier Olsbergs MSE. Any replaced parts must be purchased from the supplier Olsbergs MSE and proof of purchase retained. Any parts that are deemed unofficial replacements may be grounds for disqualification from the event.

1.8. It is the duty of each competitor to satisfy the Technical Delegate and the Stewards of the Meeting that his/her FC2 complies with these regulations in their entirety at all times during an Event.

1.9. All modifications which are not expressly authorized in these Technical Regulations, Technical Bulletins and FC2 Users Manual, are forbidden.

1.10. All measurements must be made while the car is stationary on a flat horizontal surface.

1.11. Should any dispute arise as to the eligibility and/or compliance of any entered car, Olsbergs MSE will supply any element or knowledge deemed necessary for the purpose of scrutineering in order that comparative checking may be undertaken in order to prove conformity with the original standard car.

1.12. In event of doubt concerning any element of these technical regulations, competitors are entitled to seek written clarification from Olsbergs MSE. All such questions and their responses will be circulated to all the competitors. All such responses will be considered as the official understanding of the relevant technical regulation and therefore used by Scrutineers as a complement to the regulation itself.

1.13. All competitors must be in possession of a technical passport for their car which will be issued by its ASN or the Series Promotor and must accompany the car at all times. No car will be permitted to take part in an Event unless the passport is available for inspection at initial scrutineering.

1.14 A set of Homologation Form FC-001 along with relevant VO or ER exist for the FC2 and will form part of these existing Technical regulations.

2. ELIGIBLE CARS

2.1. The only rolling chassis permitted are those manufactured by Olsbergs MSE. Once supplied, no parts may be modified in any way whatsoever, except where specifically permitted by these regulations or with the written permission of Olsbergs MSE. Any such modifications will only be permitted if they are deemed absolutely necessary after a problem has been clearly identified.

Unless authorization is specifically given or a modification is imposed within these Technical Regulations, no element may be added or removed from the original car specification. The original design and construction of the car must be preserved at all time.

Furthermore, unless specifically authorized elsewhere in these regulations, any components supplied as part of the rolling chassis or gear box which need to be replaced must be supplied by Olsbergs MSE, and listed in one of the relevant updated spares parts catalogue.

3. ENGINE

3.1. The only engines permitted are the Mountune/ Olsbergs MSE Engines. Once supplied, the engine and ancillaries supplied to it, may not be modified in any way whatsoever except with the written permission of Olsbergs MSE/ Mountune.

3.2. Any revision, repair or change of the engine can only be carried out by Mountune.

3.3. The engine will be delivered with the original security seals in place and must remain intact until the engine is returned to Mountune for any revision or repair.

3.4. ECU/GCU control:

3.4.1. The ECU will be delivered with the original security seals in place and it is the sole responsibility of each competitor to ensure these seals remain intact.

3.4.2. At the beginning of each event or test session, in accordance with the general timetable, teams must make their cars available to Olsbergs MSE in order to allow the data being download and the upload of the appropriate software parameters to each ECU or to change the ECU.

3.4.3. If a malfunction of an ECU/GCU is suspected, the stewards may authorize Olsbergs MSE assistance staff to work on any such unit.

3.5. Exhaust system must be according to the Homologation, the prescribed noise levels of the events ASN are not to be exceeded.

4. BODYWORK AND DIMENSIONS

4.1. Cars must conform to the dimensions laid out in the Homologation form FC 001 at all times.

4.2. Permitted changes to the original specification:

4.2.1. The rear wing assembly and fittings shall be as in the Homologation form.

4.2.2. In addition to Articles 4.2.3 and 4.2.4, tape may be applied to fasteners or any component surface. In all cases, it must be clear that the tape has no function other than securing the fixings, coloring or protecting the parts to which it is attached. No other taping is allowed, apart from securing fasteners or unless expressly authorized in these Technical Regulations or Series Bulletin.

4.2.3. Any modification necessary to install a radio communication system is permitted provided it has previously been approved by the scrutineers.

4.2.4. Replacement nuts, bolts and washers (except the fixings for wishbones, tie-rods, any suspension related parts, front impact structure, rear impact structure, chassis/cage mounts, engine, transmission, engine ancillaries or transmission ancillaries and in general all special studs designed for FC2 can be supplied by any supplier, however it must always retain the same function.

5. WEIGHT

5.1. The weight of the car with the driver aboard wearing his/her complete racing apparel must not be less than 1280,0 kg at all times during an Event. An allowance of 0.3% for variation of scales will be permitted.

5.2. It is permitted to complete the weight of the car by one or several units of ballast, provided that they are strong and unitary blocks, fixed by means of bolts and nuts with the possibility of affixing seals, and placed visible on the floor of the cockpit on the passenger side.

It must also be possible to fix seals if deemed necessary by the scrutineers. The size and type of weight material is free providing the fixing location is respected.

5.3. No substance may be added to the car during the race. If it becomes necessary to replace any part of the car during the race, the new part must have the same weight as the original one.

6. REPAIRS

6.1. Very minor repairs to nonstructural components may be made by the competitor after being approved by the Olsbergs MSE, and providing the damage does not affect an area greater than 500mm at its maximum dimension and does not affect a fixing or fixing area. In all other cases damaged components must be replaced by new ones or submitted to the original supplier for repair or be changed.

7. DATA ACQUISITION AND VIDEO SYSTEMS

7.1. Telemetry systems are forbidden.

7.2. Apart from the GPS device that is part of a logging/electric system supplied by Olsbergs MSE.

7.3. Disconnecting or removing any sensor fitted to the car as part of the original data acquisition system and listed in the FC2 Users Manual is forbidden.

7.4. Additional sensors that are approved by Olsbergs MSE for the RallyX may be fitted to the car provided the additional sensors are logged to the M150 ECU and provided the fittings preserve the original instruments and electrical system.

7.5. Sensors and acquisition systems may only be fitted for the sole purpose of passive data acquisition.

7.6. Should the installation of a sensor require a modification of a genuine part of the car, a written approval must be obtained from the Olsbergs MSE prior to its installation.

7.7. Separate Video and laptimer systems are allowed.

8. ELECTRICAL SYSTEM

8.1. Modifications to the original electrical system including the front extension, chassis, steering column, steering wheel, engine power, engine sensor, alternator, power supply, gearbox or rear extension wiring looms and Switches are forbidden.

8.2. Permitted changes to the original specification:

8.2.1. Providing Article 8.1 is respected, any modifications required to fit sensors and wires relating to a data acquisition system as described in Articles 7.4, 7.5 and 7.6 above.

8.2.2. Any modifications required to fit a driver communication system as described in Article 8.2.3. below.

8.2.3. The addition of any radio equipment for the sole purpose of transmitting voice communication between a driver and his team.

9. GEARBOX - TRANSMISSION TO THE WHEELS

9.1. Only Gearbox ratios listed in the homologation form may be used.

9.2. Rear differential , 35/90 and 45/90 ramp is permitted and preload are free Front differential , 30/90 and 37.5/90 ramp is permitted and preload are free

9.3. All cars must have a reverse gear operable at any time during event or test session by the driver, normally seated with the seat belts fastened and when the engine is running.

10. SUSPENSION AND STEERING

- 10.1. Suspension settings may be changed provided the adjustment margins specified by Olsbergs MSE in the FC2 User's Manual are respected.
- 10.2. Mounting points and mounting brackets may not be modified. Camber and Caster angles in front and Camber angles in rear of the car may be adjusted by the use of turnbuckles in the upper wishbones both at the front and rear of the car, but only from the range specified in the FC2 user's Manual.
- 10.3. Only springs and anti-roll bars specified by Olsbergs MSE and supplied by Olsbergs MSE may be used. Once supplied no modification of any kind is permitted.
- 10.4. Adjustment of shock absorbers is free using the range available on the original part as specified in the FC2 User Manual.
- 10.5. No modification of any sort to any damper sub-component is permitted.
- 10.6. Only bump rubbers supplied with the original fitment may be fitted to damper shafts, belleville washers or coil springs are not permitted.

11. OIL AND WATER SYSTEMS

- 11.1. Only radiators distributed by Olsbergs MSE are permitted.
- 11.2. Only Oil Tanks distributed by Olsbergs MSE are permitted.
- 11.3. Only Oil Catch Tanks distributed by Olsbergs MSE are permitted.
- 11.4. The design or material of hoses can be changed/modified without the approval by Olsbergs MSE.

12. BRAKES

- 12.1. Only brake discs distributed by Olsbergs MSE for any FC2 Series are permitted.
- 12.2. Only brake pads distributed by Olsbergs MSE for any FC2 series are permitted.

13. WHEELS AND TYRES

13.1. The wheels are specific to FC2 and can only be purchased from Olsbergs MSE.

13.2. Only tyres provided by the series official tyre supplier may be used during events or test sessions. This applies to both wet, dry and ICE tyres.

13.3. All tyres which are to be used at an event or test session will be marked with a unique identification by the official tyre supplier.

13.4. It is prohibited the usage of heater devices for tyres. Exposition to the sun is allowed.

13.5. Event tyre regulation

FC2 Dry Tyre limitations for one race

Dry-weather tyres – A maximum of eight (8) tyres per driver may be used and of these eight (8), no more than four (4) can be new tyres. For the first event a driver participates in they are allowed to use eight (8) new tyres. The tyres should not have any other pattern cut, molded or hand-cut, other than what is made by the manufacturer at the time of production. These are the only dry-weather-tyres that may be used for that particular event, practice, qualifying heats, semifinals and final.

FC2 Wet Tyre limitations for one weekend

Wet-weather tyres – A maximum of ten (10) tyres per driver may be used and of these ten (10), no more than six (6) can be new. For the first weekend a driver participates, in they are allowed to use ten (10) new tyres.

The tyres should not have any other pattern cut, molded or hand-cut, other than what is made by the manufacturer at the time of production. These are the only wet-weather-tyres that may be used for that particular event, practice, qualifying heats, semifinals and final. The driver can freely choose between dry-weather or wet-weather tyres. The driver must assume that the clerk of the course will not suspend the qualifying heats, semifinals and final.

The tyres should be assembled on the rim and presented to Technical Delegate to mark the id-number before use. Marked tyres can NOT be exchanged. It is prohibited to use tyres that have been marked or re-marked for another driver. All the tyres marked for an event will be considered as having been used once the car's timing transponder has indicated that it has entered the track.

All forms of tyre heating/heating retention devices are prohibited. No chemical and/or mechanical tyre treatment is permitted. No other form of artificial heating or heat retaining of the tyre or wheels is permitted. It is not permitted to apply tape or similar to the tyre/side of the tyres. All this applies to both dry-weather and wet-weather tyres. Scraping of the tyres are not permitted.

Drivers must ensure that the tyres used at each event conform to the Regulations.

14. COCKPIT

14.1. Permitted changes to the original specification:

14.1.1. Master cylinder pushrod length and the relative working angles may be changed for driver comfort based on the ranges defined in the FC2 User's Manual.

14.1.2. The type and position of the driver's heel or footrest are free.

14.1.3. The position of the rear-view mirrors may be changed provided the original parts and fixing points to bodywork are used.

14.1.4. It is possible to adapt the cock pit for a specific drivers needs with the joint approval of both the promotor and Olsbergs MSE only.

15. FUEL AND LUBRICANTS

15.1. Fuel and lubricants must be in conformity to the specifications laid out in the Mountune/ Olsbergs MSE and FC2 Users Manual which will be obtained by Olsbergs MSE only.

A single fuel, Bio Racing 100% is to be used in Rally X.

15.2. No additives may be used.

15.3. Any storage of fuel on board the car at a temperature more than ten degrees centigrade below the ambient temperature is forbidden.

15.4. The use of any specific device, whether on board or not, to decrease the temperature of fuel below the ambient temperature is forbidden.

15.5. Scrutineers may take fuel samples for analysis at any time during an Event or a test session following the procedures set out in the Sporting Regulations.

A minimum of three (3) liters of fuel must remain at the end of any practices, Heat or Final.

15.6. It is mandatory that refueling and fuel sample only to be carried out by means of a fast Connector as specified by the FIA, technical list no. 5 and purchased through Olsbergs MSE.

16. SAFETY EQUIPMENT AND DRIVER INSTALLATION

16.1. All cars must be equipped with a circuit breaker in conformity with Appendix J – Article 253.13.

16.2. Cars must have a fire extinguisher system. This equipment must be FIA homologated and listed in FIA List No. 16. Mounting procedures and switches (internal / external) must respect Appendix J – Article 253.7.

16.3. Safety belts supplied with the car may be changed. Replacement seat belts must wear an FIA homologation and be listed in FIA Technical List No. 24.

16.4. The safety belt fixing system to the chassis may not be changed or modified.

16.5. The driver's seat supplied with the car may be changed. Replacement seat must wear an FIA homologation and be listed in FIA Technical List No. 12 or List No. 40.

16.6. Padding is allowed for driver's comfort providing all the functionality of the seat and its safety equipment is preserved.

16.7. An extraction test may be requested at any time by the Scrutineers.

16.8. The driver, seated in his normal driving position, must be able to get out from the cockpit in 7 seconds through the driver's door and in 9 seconds through the passenger's door. For the purposes of these tests, the driver must be wearing all normal driving equipment, the seat belts must be fastened.

The steering wheel must be in place in the most inconvenient position, the window net must be in place and the doors must be closed.

16.9. All safety cage tubes situated within a perimeter of 50 cm around the driver's head, this measurement being taken with the driver sitting in the driver's seat with his harness fastened, must be equipped with protective padding complying with FIA standard 8857-2001, type A (see FIA technical list n°23 "Roll Cage Padding Homologated by the FIA").

16.10. All cars must be equipped with window nets in conformity with Appendix J – Article 253.11.

16.11. All cars must be equipped with 2 outside rear view mirrors with minimum size of 110 x 50 mm.

16.12. All cars must be equipped with towing eyes in conformity with Appendix J – Article 253.10.

16.13. Fuel tanks must be in conformity with Appendix J – Article 253.14.

16.14. Protection against fire must be in conformity with Appendix J – Article 253.15.

16.15. Each car must be fitted with the following red lights facing to the rear:

Brake lights:

- These are fitted in rear body parts.

Rearward light:

- It must be mounted on the rear of the vehicle.
- Lamp type minimum illuminated area of each light 60 cm² or Rain type lights approved by the FIA (Technical List No 19), with lighted area not exceeding 70 cm² but must be greater than 60 cm².
- It must be visible from the rear of the vehicle.
- It must be situated at the vehicle center line.
- It must be kept switched on throughout all practice sessions, heats and finals.
- It must be kept switched on even with the master switch in the “off” position.

16.16 Only windscreens of laminated glass or of a polycarbonate.

Cars with laminated windscreens which are damaged to such an extent that visibility is seriously impaired or that there is a likelihood of their breaking further during the competition, will be rejected.

17. ON-BOARD TELEVISION CAMERAS

17.1. All participants may have to carry either a camera and its electronic equipment or a dummy camera and its dummy electronic equipment at all times during Events and official tests if necessary.

17.2. The position of the camera electronic equipment and dummy camera electronic equipment is free; however, must previously be approved by the scrutineers.

17.3. The position on the car of the on-board camera will be determined and approved by Olsbergs MSE.

17.4. The usage of video cameras is authorized, however mounting systems must previously be approved by the Olsbergs MSE.

17.5. Video material may be requested by the Stewards of Event or promoter.

18. TIMING TRANSPONDERS

18.1. All cars must be fitted with a timing transponder supplied by the officially appointed timekeepers. This transponder must only be fitted in strict accordance with the instructions of the timekeepers.

18.2 All transponders must be fitted to the forward side of the front bulkhead as specified in the FC2 user's manual.

19. Tires or Tyre

19.1

Only tires from the single supplier with the original thread pattern may be used. No additional cutting is allowed. The type of tyre (dry and wet-weather) will be defined in the tyre commercial sheet. Only these registered tyres may be used for the official practice, warm up, heats, Semi finals & Final.

All tyres from the single supplier will be marked with a specific barcode and its the teams responsibility to make sure the barcode is always readable for the technical delegate.

20. Weather Kit

20.1 Olsbergs MSE will have an approved Ice Kit available for any designated Ice or wet weather Races this will include but not limited to heated front Windscreen and Windscreen blowers.