

# APPENDIX TWO

## SCHEDULE A – DRIVER AND VEHICLE SAFETY

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Amendment Number	Date published	Date implemented	Article Number
<a href="#">36090</a>	2 July 2024	2 July 2024	Article 3
<a href="#">36083</a>	4 June 2024	2 September 2024	Article 2, 4, and 5
<a href="#">36082</a>	4 June 2024	4 June 2024	Article 3, and 4
<a href="#">36065</a>	1 August 2023	1 August 2023	Article 2
<a href="#">36059</a>	10 July 2023	10 July 2023	Article 3, and 4
<a href="#">36048</a>	15 July 2022	15 July 2022	Article 4
<a href="#">36042</a>	6 December 2021	6 December 2021	Article 4
<a href="#">36041</a>	6 December 2021	1 January 2022	Article 4, 5 and 6
<a href="#">36032</a>	1 July 2021	1 July 2021	Article 8
<a href="#">36027</a>	1 March 2021	1 March 2021	Article 3, 4, 5 and 8
<a href="#">36026</a>	1 March 2021	1 June 2021	Article 4
<a href="#">36013</a>	9 January 2020	9 January 2020	Article 4
<a href="#">36012</a>	1 August 2019	1 August 2019	Article 7
<a href="#">36005</a>	18 June 2019	18 June 2019	Article 4, 5, and 6
<a href="#">36003</a>	18 April 2019	18 April 2019	Article 4, and 5
<a href="#">36001</a>	19 September 2018	19 September 2018	Article 3

### Part One

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**Article 1** Introduction

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**Note:** Amendments will be visually highlighted for a duration of 12 months starting from the implementation of each amendment. Text changes made for grammatical and/or formatting purposes will not be subject to highlighting.

## Part One

### 1. Introduction:

**1.1 Use of this Schedule:** This Schedule provides competitors with standards for the preparation of vehicles entering motorsport competitions and shall be read and used in its entirety.

### 1.2 Scope of this Schedule:

- (1) This Schedule specifies the minimum requirements for general motorsport competition.
- (2) All vehicles permanently residing in New Zealand competing in MotorSport NZ permitted Events shall comply fully with the requirements of this Schedule, subject to Articles (4), (5) and (6) below.
- (3) Visiting vehicles, with valid ATA Carnet documentation from the export country, which are competing in no more than three(3) events in a twelve(12) month period may be scrutineered to the applicable vehicle safety regulations (although specifically excluding alloy safety cages) published by the ASN of its export country providing:
  - (a) The applicable safety regulations are presented with the vehicle at the time of scrutineering, and
  - (b) The ATA Carnet documentation is available on request, and
  - (c) Compliance with Part One Article 3.6 Dangerous Construction or Condition is maintained at all times.
- (4) Alternative requirements to those contained in this Schedule may be authorised by MotorSport NZ in any of the following documents:
  - (a) MotorSport NZ Championship / Sanctioned Series Articles and Technical Regulations, or
  - (b) Other Schedules of the National Sporting Code.
- (5) Additional requirements to those contained in this Schedule may also be authorised by MotorSport NZ in any of the following documents:
  - (a) Event Supplementary Regulations, and/or
  - (b) Official Bulletins.
- (6) Where alternative / additional requirements are imposed they shall take precedence over this Schedule.

**Note:** *For all MotorSport NZ Championship Technical Regulations refer to the specific schedules issued annually. When approved these are available on the MotorSport NZ website or on request from the MotorSport NZ administration.*

**1.3 Historic and Classic Vehicles:** Vehicles manufactured prior to 1 January 1978 with a valid Certificate of Description (COD) which are eligible to compete under Appendix Six Schedules K, T & C and CR shall either comply with the requirements of this Schedule or alternatively Appendix Six Schedule AA.

2. **Interpretations:** Terms that are specific to this Schedule are defined here. For further definitions refer to National Sporting Code Article 2(1).
- “ATA Carnet”** means an international customs document to enable the temporary importation (without the payment of duty); and
- “Authority card”** means the LVV / MotorSport Authority Card which provides for specific exemptions / alternative standards to those of the VIRM and which is administered by MotorSport NZ; and
- “Ballast”** means non-functional material added to increase the vehicle weight; and
- “Bodyshell”** or **“Chassis”** means the load bearing structure of the vehicle to which the drive train and suspension are attached; and
- “Bodywork”** means all the entirely suspended parts of the vehicle that are licked by the air stream; and
- “Chief Scrutineer”** means the senior Scrutineer appointed by the Event Organiser to be responsible for carrying out Safety Audits in accordance with this Schedule; and
- “Closed vehicle”** means a vehicle with a permanent rigid structure, other than a rollcage, that extends from the top of the vehicle’s windscreen over the occupants to the rear of the vehicle; and
- “Cockpit”** means the structural inner volume of a vehicle which accommodates the occupants; and
- “Competitor Apparel”** means items of clothing, footwear and protective helmets, designed specifically to enhance competitors’ safety, worn by the driver and/or co-driver, while seated in a vehicle used in competition; and
- “Dedicated Motorsport Vehicle”** or **“DMV”** means a vehicle that has been constructed or modified solely for use in motor sport competitions including where the use of public roads is a part of the event providing the vehicle is in possession of a valid Authority Card; and
- “Electronic Stability Control”** or **“ESC”** means a manufacturer installed system designed to minimise the loss of control or traction of the vehicle; and
- “GT”** means a performance derived two(2) door closed vehicle with two(2) seats or 2+2 seating; and
- “LVVTA”** means the Low Volume Vehicle Technical Association, being the sole agency recognised by the NZTA, authorised to issue alternative standards to those of the VIRM; and
- “Manufacturer Occupant Protection System”** or **“MOPS”** means the safety system originally installed by the vehicle manufacturer as part of a frontal impact protection system and shall include the airbag/s and pre-tensioning safety belts; and
- “MotorSport NZ Vehicle Logbook”** means a physical or digital logbook issued by MotorSport NZ used to record all relevant information pertaining to a vehicle’s competition history; and
- “NZTA”** means the New Zealand Transport Agency; and
- “Occupant”** means any driver, co-driver, or passenger taking part in an Event; and
- “Open vehicle”** means any vehicle not classified as a closed vehicle; and

**“Purpose built vehicle”** means a vehicle that;

- (1) Has a safety cage fitted, that is not equipped as standard on all production examples of the vehicle, or
- (2) The construction of which prevents its use on public roads; and

**“Racing net”** means a net that is designed and fitted to provide lateral restraint to the seat and driver during lateral and angled lateral impacts; and

**“Road registered vehicle”** means a vehicle with a current valid licence label and Warrant of Fitness; and

**“Safety Structure”** means any one(1) or a combination of the following definitions;

- (1) **“Safety Rollbar”** means a (stand-alone) form of roll protection: Its **“principal structure”** being the structural framework consisting of a main Rollbar (hoop), two(2) Backstays (or Lateral Bracing Stays sometimes only one(1) in a single-seater application), one(1) diagonal member, a safety harness bar (from 1 January 2013), and mounting points or,
- (2) **“Safety Cage”** means a multi-tubular structure installed in the cockpit and fitted close to the interior profile of the bodyshell. Its **“principal structure”** being the structural framework consisting of a Safety Rollbar (as detailed in (1) above), plus a Front Rollbar (or of two(2) Lateral Rollbars), their connecting members, two(2) Backstays, one(1) Diagonal member, a safety harness bar (from 1 January 2013), and mounting points; and

**“Saloon”** means a two(2) or four(4) door vehicle not falling into the Sports Car, Sports Racing Car, or GT categories, including the convertible and hatchback variants of the same; and

**“Series production vehicle”** means a vehicle that is or has been manufactured in a certain number of identical examples using series production methods destined for public road use, and is or was available on general catalogued sale; and

**“Single seater”** means an open vehicle that has been designed and constructed to carry the driver at the centre line of the vehicle chassis; and

**“Sports Car”** means an open or closed vehicle with factory provision for two(2) seats; and

**“Sports Racing Car”** means an open or closed vehicle with provision for two(2) seats disposed one on either side of the vehicles longitudinal centre-line and designed primarily for competition use, and

**“Technical Passport”** means a physical or digital logbook issued by MotorSport NZ to applicable FIA Homologated vehicles used to record all relevant information pertaining to a vehicle’s competition history; and

**“Tyres”** are defined as follows:

- (1) **“Road tyre”** means a Treaded tyre designed and manufactured for public road use that fully complies with the VIRM issued by NZTA.
- (2) **“Slick tyre”** means a tyre constructed and marketed specifically for competition use (not for road use) on dry sealed surfaces, having a maximum of 17% grooves moulded or cut into the tyre road contact surface; and
- (3) **“Treaded tyre”** means a tyre designed for use on any surface having a minimum of 17% grooves moulded or cut into the road contact surface.

- (4) **“Wet tyre”** means a treaded tyre (moulded or cut) constructed and marketed specifically for competition use (not for road use) on wet sealed surfaces; and

**“VIRM”** means the Vehicle Inspection Requirements Manual as published by the NZTA, being the in-service safety requirements for road registered vehicles.

**“Window net”** means a net that is designed and fitted to protect the driver from having any body part protrude through the window during an incident.

### **3. Safety Audits:**

#### **(1) Competitor’s responsibility:**

- (a) It is the responsibility of the Competitor to read and understand this Schedule and to ensure that their vehicle meets, at least, the minimum safety/eligibility requirements of this Schedule and all other relevant Schedules to the National Sporting Code. A Competitor Declaration confirming compliance shall be completed as part of the Event entry. The presentation of a vehicle for Safety Audit shall be deemed an implicit statement of conformity with this Schedule.
- (b) Competitors shall make their vehicle available for safety audit:
  - (i) When requested to by an Event Official, and
  - (ii) With all equipment that is to be used during the event, and
  - (iii) In a clean condition, and
  - (iv) With the valid MotorSport NZ logbook for the vehicle (where applicable).

#### **(2) Safety Audit selection process:**

- (a) The Chief Scrutineer or their appointed representative shall select vehicles for Safety Audit as follows:
  - (i) For Rallies: prior to the scheduled start time of the vehicle.
  - (ii) For all other Events: prior to Qualifying and/or any Competition.
- (b) Any vehicle may be selected for Safety Audit, although the following vehicles shall be selected:
  - (i) All vehicles without a MotorSport NZ logbook, and
  - (ii) Vehicles which have not been audited at the last two(2) Events entered or within the last six(6) month period, and
  - (iii) Vehicles and/or competitors known to be competing for the first time, and
  - (iv) Vehicles with outstanding defects as previously noted in their vehicle logbook, and
  - (v) Competitors who request a Safety Audit to be carried out on their vehicle, and
  - (vi) Any other vehicles required to ensure that no less than 15% of competing vehicles at an Event are audited, and

(vii) Visiting vehicles (with an overseas logbook) which are not permanently residing in New Zealand (refer Part One Article 1.2(3))

(3) **Appointed Scrutineers:** are appointed in accordance with Appendix One Schedule O.

- (a) For ClubSport Events where there is no requirement for a licensed Scrutineer, the Clerk of the Course takes responsibility for appointing an appropriately qualified official to take on this role.
- (b) Scrutineers shall carry out Safety Audits as determined by the Safety Audit selection process pursuant to the requirements of this Schedule, other relevant schedules to the National Sporting Code, and Event Supplementary Regulations.

(4) **Remote Safety Audits:** Where authorised within Event Supplementary Regulations as approved by MotorSport NZ, Safety Audits may be performed prior to and remotely from an Event. The Competitors' responsibility as to the safety and eligibility of their vehicle remains as per Part One Article 3.1(1)(a) above.

- (a) The Supplementary Regulations of the Event will specifically cover when, where and by whom the Safety Audits will be performed.
- (b) The Chief Scrutineer of the Event will ensure the following is provided for:
  - (i) Appointment of the (remote) licensed Scrutineers, and
  - (ii) An audit inspection program (worksheet) is established and issued to the appointed Scrutineers, and
  - (iii) That all Safety Audits are performed within 14 days prior to the event and the results of which are recorded and reported to the Clerk of the Course, and
  - (iv) All vehicle logbooks are notated accordingly.
- (c) The Event Organiser will ensure that facilities are maintained for safety audits to be performed at the Event.

**3.2 Impounding of Safety Items:** Where there is doubt about the fitness of any Safety Item, the Chief Scrutineer or Technical Officer may impound the item for the duration of the Event. A receipt shall be provided and the impounded item will be available to be collected at the completion of the Event.

**3.3 Documentation Label:**

- (1) At the discretion of the Event Organiser, identification labels may be supplied to each Competitor at the successful completion of Documentation / Safety Audit. Its purpose is to indicate to Officials that the Competitor has passed all Safety Audit and documentation requirements.
- (2) Where used the label shall:
  - (a) Be affixed in the following location:
    - (i) Open Vehicles on the right hand side of the rollbar so it is clearly visible.

- (ii) Other vehicles on the side glass immediately behind the Driver, or on the rollbar facing outwards so it is visible through the side glass.
- (b) Remain in place for the duration of the Event.

### 3.4 MotorSport NZ Vehicle Logbook:

- (1) **Issue and use of Logbooks:** MotorSport NZ issues Vehicle Logbooks on receipt of a completed application and fee. Logbooks are used to record all relevant information pertaining to a vehicle's competition history.
- (2) **Requirements:** It is recommended that all vehicles have a Logbook, however for the following vehicles a valid Logbook is mandatory:
  - (a) All vehicles competing in a Series, and
  - (b) All Purpose Built and all Dedicated Motorsport Vehicles, and
  - (c) All vehicles requiring a LVV / MotorSport Authority card, and
  - (d) As required by the Event Supplementary Regulations.
- (3) **Contents:** The Logbook shall contain the following information:
  - (a) Vehicle identification (make, model, year of manufacture and chassis number), and
  - (b) A current (¾ front view) photograph of the vehicle, and
  - (c) Which safety schedule the vehicle complies with, and
  - (d) Current ownership details, and
  - (e) Safety Structure homologation or approval certificate (where applicable), and
  - (f) The competition history of the vehicle, including a record of the following;
    - (i) All Events entered, and
    - (ii) Safety and eligibility inspections and irregularities, and
    - (iii) Scrutineers notations, including any significant accident damage, and
    - (iv) Details of all applied seals. (refer Part One Article 3.7)
- (4) **Validity:** The logbook shall be deemed invalid if:
  - (a) The vehicle is found to differ from the identification data, and/or
  - (b) The ¾ view photograph is missing or misrepresentative of the vehicle, and/or
  - (c) The Logbook has been completed and there is no space to make further entries.
- (5) **Entries or amendments to the Vehicle Identification Details:** These may only be made by a MotorSport NZ Technical Officer, or the MotorSport NZ Technical Department.

- (6) **Presentation of Logbook:** Every time a vehicle is used in competition its logbook shall be presented at documentation (and at any other time during an Event when requested by an official). If a logbook is required under Part One Article 3.4(2) above and that vehicle's valid logbook is not available for presentation, for whatever reason, the Clerk of the Course may permit the vehicle to compete if;
- (a) The vehicle has undergone to a Safety Audit and clearance is obtained, and
  - (b) The penalty as prescribed in Appendix One Schedule P to the National Sporting Code is applied.
- (7) **Entries or amendments to the logbook:**
- (a) Any entry pertaining to; safety, eligibility or the compliance of the vehicle shall only be made by an authorised MotorSport NZ official.
  - (b) At documentation, the Chief Scrutineer, or their delegate, shall:
    - (i) Check the Logbook for accuracy, previous notations, in particular any items that require rectification, and when the vehicle was last audited, and
    - (ii) Notate the Event the vehicle has entered and whether the vehicle is being 'Audited' or 'Not Audited'.
- (8) **After an accident:** When significant vehicle damage is sustained, it is the Competitor's responsibility, to present the vehicle and Logbook, to the Event Chief Scrutineer for inspection and notation of any applicable information or as requested by the Clerk of the Course.

**3.5 Equivalence Factors:** For engines, other than naturally aspirated four stroke, the following equivalence factors are to be used to determine the engine capacity, unless otherwise stated in the class regulations:

• Forced Induction	x 1.7
• Rotary Engine	x 1.8
• Two stroke	x 1.8
• Diesel Forced Induction Engines	x 1.5

The nominal cylinder capacity will be multiplied by the applicable factor/s above and hence will pass the vehicle into the class corresponding to the fictive volume thus obtained.

**3.6 Dangerous Construction and Condition:** If the construction or condition of a vehicle is deemed to be dangerous by a Scrutineer or Technical Officer, or if a vehicle has suffered damage during an Event so that further participation could be dangerous, it may be excluded from competing by the Clerk of the Course.

**3.7 Sealing of Components:**

- (1) **Purpose:** To ensure that components or assemblies of components are not disturbed or substituted during or between Events. Seals shall also be applied where required as part of Event or Series regulations.
- (2) **Application:** A seal may be applied to a vehicle, component and/or assembly of components by a;



- (a) Technical Officer, or
  - (b) Series Scrutineer, or
  - (c) Licensed Scrutineers appointed to an Event, or
  - (d) Request from MotorSport NZ, or
  - (e) Request from a Steward or Clerk of the Course.
  - (f) Competitors are required to present their vehicle for the application of seals where required by Series Articles. Technical Officers or Series Scrutineers shall report to the Event Director, Race Director, or Clerk of the Course, any Competitor who fails to present their vehicle when requested. The Event Director, Race Director, or Clerk of the Course may impose penalties on the Competitor under the provisions of the National Sporting Code.
- (3) **Recording of Seals:** The Competitor shall supply the vehicle's Logbook to the appointed Official so that details may be recorded as follows;
- (a) Event, date and time at which the seal is applied, and
  - (b) Category of seal and component or assembly being sealed.
- (4) **Category of Seal:** Seals may be one(1) of three(3) categories as follows;
- **'A' type seals** may be applied at any time during an Event and may only be broken thirty(30) days after their application date.
  - **'B' type seals** may be applied at any time during an Event and may only be broken after the conclusion of an Event. (*Example: Seals applied to forced induction systems*)
  - **'C' type seals** are applied as required by Class regulations and shall be applied in accordance with the Class Schedule and/or Series Articles. These seals remain valid for the duration of the Series plus thirty(30) days (expire thirty(30) days after the final round of the Series).
- (5) **Type of Seals:** Seals may be in the form of;
- (a) Paint (reaction type), or
  - (b) Wire and metal crimp seal, or
  - (c) Wire security seal with identification tag
- (6) **Breaking Seals:** Seals may only be broken after the validity period of the seal category has expired. Where removal of a seal for maintenance is required before the expiry date, authorisation must be sought from MotorSport NZ or Series Scrutineer prior to the seal's removal. Technical Officers or Series Scrutineers shall report any breakage or tampering not in compliance with the above to the Event Director, Race Director, or Clerk of the Course who shall impose penalties on the Competitor under the provisions of the National Sporting Code.

### 3.8 Vehicle Noise Level:

- (1) **Races:** No vehicle may exceed 95dB(A). The measurement shall be taken thirty(30) metres at a right angle from the track at a point where the vehicle is at maximum power. No compensation for differing climatic conditions shall be applied.

- (2) **All Other Events:** Noise emission from competition vehicles shall not exceed 95dB(A) and may be monitored at any time during an event, particularly where events include the use of public roads and vehicles are operated in close proximity to areas where excessive noise may be of significant concern, i.e. city-centres, residential areas, etc. Competitors are reminded of the importance of maintaining noise emissions to an environmentally acceptable level, and to ensure that, where appropriate, their vehicles are operated in a considerate and appropriate manner at all times.
- (3) **Noise Judgement:** Noise Judges shall be appointed where there are noise emission limitations and the Clerk of the Course shall be the final arbiter in this matter. There is no right of protest between Competitors in relation to noise levels.

### 3.9

#### Fuel:

- (1) **General:** All fuel used in competition must comply with the prescriptions of this Schedule. All fuel must be used without additives other than those permitted within this schedule. Other than for pump fuel, the mixing of fuels from different commercial sources, or of different grades is forbidden.
  - (a) **Oxidants:** Only air may be mixed with the fuel as an oxidant. The use of oxidants such as Nitrous Oxide is forbidden.
- (2) **Approved fuels:** The following are the only fuels authorised under this Schedule:
  - (a) Commercially available fuel from a New Zealand Service Station forecourt pump on current sale being;
    - (i) Unleaded 91 Octane (RON) Regular Grade Petrol, and
    - (ii) Unleaded 95 Octane (RON) Premium Grade Petrol, and
    - (iii) Unleaded 98 Octane (RON) Premium Grade Petrol including ethanol blends (E10), and
    - (iv) Diesel (including B5).
  - (b) Petrol/ethanol blended fuels produced in New Zealand up to E85 for sale and in compliance with New Zealand Engine Fuel Specifications Regulations 2011. These fuels may be supplied from a drum.
  - (c) **Unleaded Racegas:** Unleaded racing fuel is defined as an unleaded petrol produced in compliance with the specifications detailed in FIA Article 252 of Appendix J to the current FIA Yearbook. Such Unleaded Racing Fuel supplied from a drum is permissible.
  - (d) Avgas (aviation fuel) purchased in New Zealand.
- (3) **Limitations:** Supplementary Regulations, Series Articles or Class Regulations may prohibit the use of one(1) or more of the above fuels.
- (4) **Allowance:** MotorSport NZ Championship and Sanctioned Series Articles may allow the use of other specified fuels. Refer to current Series Articles/Portfolios.
- (5) **Additives or blends:** Unless otherwise approved, additives of any kind or specification or chemical description or composition shall not be added to the fuel nor may a blend of two or more fuels be used. The only approved additives are:

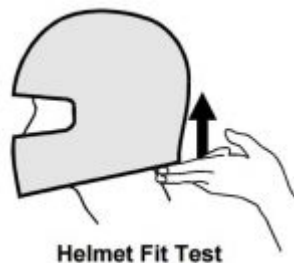
- (a) Lubricating oil for rotary and two stroke engines, and
  - (b) **Valve recession:** Commercially available lead substitutes to reduce valve recession may be used with unleaded fuels in strict accordance with the manufacturer's instructions. These additives may not be used to enhance the octane number of the fuel.
- (6) All fuel shall comply with the specifications as detailed in the Fuel Specification Chart as detailed in Part Two Article 3 of this Schedule.

**4. Safety Critical Items:** All safety critical items shall be presented and used in a serviceable condition without evidence of damage or significant wear.

**4.1 Protective Helmets:**

(1) **Helmet Requirements:** Protective helmets shall be worn during all events, (except Motorkhanas and Car Trials) as per Chart 1 below. Protective helmets shall:

- (a) Comply with a current approved standard, and
- (b) Be a snug fit on the wearer and must not be able to be removed by lifting the rear of the helmet (refer diagram below), and



- (c) Be in good condition, free of significant scratches and/or cracks, and
- (d) Not be modified, except as specifically permitted by the helmet manufacturer, standards body or MotorSport NZ. In particular;
  - (i) ABS and Polycarbonate helmets shall not be painted, and
  - (ii) Composite shell helmets may only be painted with a paint approved by the helmet manufacturer, and
  - (iii) Intercom earphones and microphones should only be fitted in helmets specifically designed for their use.
  - (iv) Cameras shall not be attached to helmets by any means except where the camera forms an integral part of the helmet as provided by the manufacturer and the model of helmet is approved under one of the accepted standards.
- (e) Closed face helmets shall be worn in all vehicles without a full height (over the occupants head measured vertically) windscreen.
- (f) A Scrutineer or Technical Officer may check helmets at any time during an Event.

- (2) **Approved Helmet Standards:** Examples of the following standards labels are detailed in Part Two Article 4 of this Schedule.

<b>Chart 1 – Helmets Requirements</b>		
Standard	Discipline accepted	FHR Compatible
<b>FIA:</b>		
FIA 8860-2018* ††	All events up to International	Yes
FIA 8860-2010* †† FIA 8860-2004* †† FIA 8859-2015* †† FIA 8859-2010* ††	All events up to and including Championship and some International events	Yes
<b>Snell Foundation Inc:</b>		
SA 2020* † SA 2015* † SA 2010* † SAH 2010* †† SA 2005 † *valid until 31 December 2026	All events up to and including Championship and some International events	Yes
CMR/CMS 2007 (Youth Helmet)	All ClubSport events	No
M 2020 M 2015 M 2010 M 2005 *valid until 31 December 2026 K 2015 K 2010 K 2005 *valid until 31 December 2026	All ClubSport;	No
<b>SFI Foundation Inc:</b>		
SFI Spec 31.1A* SFI Spec 31.2A* SFI Spec 31.1/2005*	All events up to and including Championship and some International	Yes
SFI Spec 41.1/2005 SFI Spec 41.1A SFI Spec 41.2A	All ClubSport;	No
<b>British Standard Institute:</b>		
BS6658-85 Type A/FR red label) † Including all amendments. Valid for up to 10 years from the date of manufacture, dependant on condition.	All ClubSport Race up to and including Championship; Rally up to and including Championship	Yes
<b>European Standard (R22):</b>		
ECE 22 'E' Mark 04, 05 or 06 series <b>Note:</b> The series number is not the number in the circle. It is the number located close by, an example being; 05-12345.	All ClubSport;	No
<b>Australian Standard:</b>		
AS 1698	All ClubSport;	No

**Notes:**

\* denotes helmets also approved for use in International status Events.

† denotes helmets also approved for use with Frontal Head Restraints (FHR) requiring the retro-fitment of tether posts.

†† denotes helmets fitted with tether posts by the helmet manufacturer / agent.

**Recommendations:**

1. Helmets should be replaced at least every seven(7) years, and
2. Helmets (when not in use) should be kept in helmet bags, and
3. In the case of a severe impact the helmet should be destroyed, and
4. Foam neck braces may be used for the purpose of driver comfort, providing they are made entirely of fire resistant material.

**(3) MotorSport NZ Approval Labels:** May be applied to the outside of the helmet in the approximate area of the occupant's ear on the side nearest to the side window of the competing vehicle.

- (a) Labels may be applied by selected Scrutineers after the helmet has been checked for conformity with the standard and is considered to be in an acceptable condition.
- (b) Labels will be valid for the duration of the calendar year applied as printed on the label, provided they remain in acceptable condition.
- (c) The existence of an approval label on a helmet does not guarantee the continued serviceability of that helmet and the label may be removed by a Scrutineer at any time the helmet is considered not to be acceptable.

**4.2 Frontal Head Restraints (FHR):**

**(1) Frontal Head Restraint Requirements:** All occupants shall wear FHR made to an approved standard as per Chart (1) below:

		<b>Chart (1) – Frontal Head Restraint Requirements</b>			
		<b>01 October 2020 onwards</b>	<b>From 1 January 2023</b>	<b>From 1 May 2023</b>	<b>From 1 January 2024</b>
<b>Race</b>	<b>Championship</b>	Mandatory	Mandatory	Mandatory	Mandatory
	<b>Accredited Series</b>	Mandatory	Mandatory	Mandatory	Mandatory
	<b>National</b>	Mandatory (refer Note 1)	Mandatory (refer Note 1)	Mandatory (refer Note 1)	Mandatory (refer Note 1)
	<b>Clubmans</b>	Recommended (refer Note 3)	Recommended (refer Note 3)	Mandatory (refer Note 1)	Mandatory (refer Note 1)
	<b>Historic</b>	Mandatory (refer Note 2)	Mandatory (refer Note 2)	Mandatory (refer Note 2)	Mandatory (refer Note 2)
<b>Rally</b>	<b>Championship</b>	Mandatory	Mandatory	Mandatory	Mandatory
	<b>National</b>	Recommended	Mandatory	Mandatory	Mandatory
	<b>Clubmans</b>	Recommended	Mandatory	Mandatory	Mandatory
<b>ClubSport</b>	<b>Rallysprint</b>	Recommended	Recommended	Recommended	Mandatory
	<b>Advanced</b>	Recommended	Recommended	Recommended	Recommended
	<b>Basic</b>	Optional	Recommended	Recommended	Recommended

**Notes:**

1. *FHR's are not mandatory for cars without safety cages.*
2. *For Schedule K cars with a valid Certificate of Description, where it is impractical to achieve the harness mounting requirements the use of a frontal head restraint is not mandatory.*
3. *The use of FHR's in Clubmans racing is flagged for future introduction.*

**(2) Frontal Head Restraints shall:**

(a) Comply with an approved standard, being:

- FIA – FIA8858-2002
- FIA – FIA8858-2010
- SFI – Spec 38.1

(b) Be a good fit on the wearer, and

(c) Be of the correct type/angle for the vehicle being driven, and

(d) Be in good condition, free of cracks or signs of damage, and

(e) Not be modified, except as specifically permitted by the manufacturer.

(3) Frontal Head Restraints shall only be used in combination with helmets bearing one(1) of the following standard markings:

- FIA – 8860, 8859 & 8858,
- Snell – SA 2015, SA 2010, SAH 2010, SA 2005 & SA 2000,
- British Standard – BS 6658-85 A/FR, and
- SFI – Spec 31.1/2005, Spec 41.1/2005 & Spec 24.1 (Youth).

(4) Where FHR's are used the following Safety Harness requirements shall apply:

(a) For Saloon cars and Open cars:

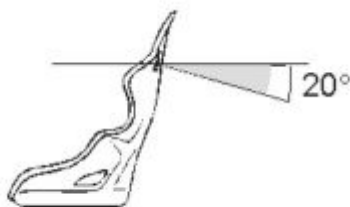
(i) Safety harnesses being either 5 strap, 6 strap or 4 strap bearing one of the following standards markings are mandatory:

- FIA 8853-2016
- FIA 8853/98
- SFI 16.1 or SFI 16.5
- FIA 8854/98

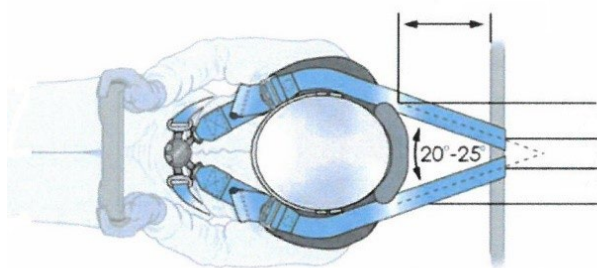
**Note:** *It is strongly recommended that either a 5 strap or 6 strap safety harness is used in conjunction with a FHR. A 4 strap safety harness is accepted but not recommended.*

(ii) Safety harness shoulder straps shall slope downwards from the shoulder to the anchorage point to create an angle of 0o to 20o. Shoulder strap length should be

kept to a minimum (ideally 200mm – 400mm) and should converge to the attachment point.



**Diagram 4.2 - FHR Safety Harness Mounting Angles**

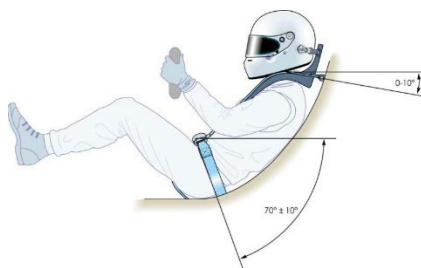


**(b)** For Single Seater cars and Sports Racing cars:

**(i)** Safety harnesses being 6 strap bearing one of the following standards markings are mandatory:

- FIA 8853-2016
- FIA 8853/98
- SFI 16.1 or SFI 16.5

**(ii)** Safety harness shoulder straps shall be installed at 0° to the horizontal with angles between of 0° to 10° downwards being acceptable.



**(5)** Where FHR's are used the following Seat requirements shall apply:

**(a)** For Saloon cars and Sports cars seats shall be:

- A competition seat compliant to FIA 8855-1999, or 8862-2009, or SFI 39.2, or SFI 39.1 is recommended, or
- A 'bucket style' replacement seat with fixed-back (non-adjustable rake), manufactured to a professional standard that incorporates a headrest and cushioned harness apertures is accepted but not recommended.

**Note:** *Frontal Head Restraints are designed to work in combination with a range of occupant protection measures. It is strongly recommended that a FIA or SFI compliant seat is used.*

**(b)** For Single Seater cars and Sports Racing cars seats shall be:

- As homologated in the vehicle, or
- A 'bucket style' seat with fixed-back (non-adjustable rake), manufactured to a professional standard that incorporates a headrest and cushioned harness apertures.

**(6) Inspection:** A Scrutineer may check Frontal Head Restraints at any time during an Event for condition and correct use.

**Recommendations:**

1. *It is strongly recommended that occupants practice rapid evacuations from the car with full race equipment fitted to familiarise themselves, and*
2. *For occupants of Saloon/GT vehicles Frontal Head Restraints are most effective when used in combination with head restraint seats and racing nets.*
3. *When using any Frontal Head Restraint the mounting of the safety harness is critical. Shoulder straps should be 200mm to 400mm long.*

**Notes:**

1. *Compliant Frontal Head Restraints are recognised by the applicable standards label.*
2. *FIA Technical Lists may be accessed at [www.fia.com](http://www.fia.com), SFI Foundation Spec 38.1 Compliant Device Manufacturers may be accessed at [www.sfifoundation.com](http://www.sfifoundation.com)*
3. *An information guide for the use of HANS® and Hybrid devices is published by the FIA, a copy of which may be accessed at [www.fia.com](http://www.fia.com)*



### 4.3 Protective Clothing:

- (1) **Types of Protective Clothing:** Protective clothing is categorised as follows and shall include but is not limited to the following types as per Chart (1):

Chart (1) – Protective Clothing Types / Standards						
	Overall	Underwear	Socks	Shoes	Gloves	Balaclava
	One-piece garment worn as an outermost layer, designed with close fitting front, cuffs and ankles which entirely cover the wearer except for the head, hands and feet	Garments designed to be worn between the overall and the wearer's body entirely covering the wearer except for the head, hands and feet	One-piece close fitting garment covering at least to mid-calf	Garment that covers the whole foot and ankle	Garment that covers the whole hand and wrist	One-piece close fitting garment that covers the head and neck
<b>A</b>	FIA 8856-2000 <sup>(1)</sup> FIA 8856-2018 <sup>(2)</sup>	FIA 8856-2000 <sup>(1)</sup> FIA 8856-2018 <sup>(2)</sup>	FIA 8856-2000 <sup>(1)</sup> FIA 8856-2018 <sup>(2)</sup>	FIA 8856-2000 <sup>(1)</sup> FIA 8856-2018 <sup>(2)</sup>	FIA 8856-2000 <sup>(1)</sup> FIA 8856-2018 <sup>(2)</sup>	FIA 8856-2000 <sup>(1)</sup> FIA 8856-2018 <sup>(2)</sup>
<b>B</b>	FIA Norm 1986 ISO 6940 <sup>(8)</sup> Multi-layer SFI 3.2A/3 <sup>(4)</sup> Multi-layer FR material <sup>(3)</sup>	SFI 3.3, <sup>(7)</sup> ISO 6940 <sup>(7, 8)</sup>	SFI 3.3 ISO 6940 <sup>(8)</sup>	SFI 3.3 ISO 6940 <sup>(8)</sup>	SFI 3.3 ISO 6940 <sup>(8)</sup>	SFI 3.3 ISO 6940 <sup>(8)</sup>
<b>C</b>	SFI 3.2A/1, <sup>(5)</sup> ISO 6940 <sup>(8)</sup> Single-layer FR material <sup>(3)</sup>	Cotton <sup>(6)</sup> Wool, FR material <sup>(3)</sup>	Cotton <sup>(6)</sup> Wool, FR material <sup>(3)</sup>	Leather, FR material <sup>(3)</sup>	Leather, FR material <sup>(3)</sup>	–
<b>D</b>	Cotton <sup>(6)</sup>	–	–	–	–	–
<b>E</b>	No requirement	No requirement	No requirement	No requirement	No requirement	No requirement

#### References:

1. All garments certified to FIA 8856-2000 Std are detailed in FIA Technical List No.27. Where FIA Std garments are mandated under this schedule all garments must maintain compliance with the standard.
2. FIA 8856-2018 will become mandatory for level A from 31 December 2028 for FIA inscribed classes.
3. (FR) Fire Resistant means garments made from purpose designed fabrics with 'built-in' self-extinguishing properties. The material must be identified on the manufacturers label with common examples being; Nomex, CarbonX, Proban®, ProTek®, Pyrovatex®, Aramid fibres etc.
4. SFI 3.2A/3< means SFI Quality Assurance Specifications 3.2A/3, 3.2A/5, 3.2A/10, 3.2A/15 and 3.2A/20. The SFI 3.2A Spec label will be found on the left arm or the collar.
5. SFI 3.2A/1< means SFI Quality Assurance Specifications 3.2A/1. The SFI 3.2A Spec label will be found on the left arm or the collar.
6. All cotton garments except socks must have a manufacturer label stating 100% Cotton (no 'Spandex' or Synthetics).

7. Garments manufactured to this standard in a 'short sleeved' or 'short pant' version can be accepted.  
8. Signifies that the material the garment has been made from has been tested to ISO6940.

**Notes:**

1. Garments predominantly made of a flammable material such as nylon or similar synthetics are not approved for use under any circumstance.  
2. FIA Technical Lists are accessed at: <https://www.fia.com/>

- (2) **Protective Clothing Requirements:** All occupants shall wear clothing made to an approved standard or of an approved standard and design as per chart (2):

Chart (2) – Protective Clothing Requirements							
		Overall	Underwear	Socks	Shoes	Gloves	Balaclava
<b>Race</b>	International Race Meeting	A	A	A	A	A	A
	Championship	A, B	A, B	A, B	A, B	A, B	A, B
	National Race Meeting	A, B	A, B	A, B	A, B	A, B	A, B
	Clubmans Race Meeting	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C	A, B
<b>Rally</b>	Championship	A	A	A	A	A*	A
	National Rally	A, B	A, B	A, B	A, B	A*, B*	A, B
	Clubmans Rally (incl Rallysprints)	A, B, C	A, B, C	A, B, C	A, B, C	A*, B*	A, B
	Other	A, B, C	A, B, C	A, B, C	A, B, C	E	E
<b>ClubSport</b>	Advanced (excl Rallysprints)	A, B, C	(A, B, C) <sup>(6)</sup>	A, B, C	A, B, C	E	E
	Basic	A, B, C, D	(A, B, C) <sup>(6)(7)</sup>	A, B, C <sup>(7)</sup>	A, B, C	E	E
	Motorkhanas and Car Trials	E	E	E	E	E	E

\*The wearing of gloves is optional for co-drivers.

**Notes:**

1. The specified letters [A, B, C, D, E] correspond to the specific requirements applied to the item of clothing as detailed in Chart (1).  
2. Requirements for International Status Events shall comply with the current regulations published by the FIA.  
3. Requirements are as specified unless detailed otherwise within Event Supplementary Regulations or Series Regulations as approved by MotorSport NZ.  
4. Requirements for passengers will be the same unless detailed otherwise within Event Supplementary Regulations or Sanctioned Series Regulations as approved by MotorSport NZ.  
5. Condition – dirty, damaged, ill-fitting or excessively worn garments may render them unsuitable for use.  
6. Only mandatory where a single-layer overall is worn.

7. For Autocross and Standing Sprint Single Car events there is no requirement for compliant underwear or socks but any garments worn beneath overalls must be either cotton or wool.

8. For FIA 8856 2018 standard clothing, badges sewn directly onto the overalls shall be 'Fire-Resistant' backed and attached using fire-resistant thread. Any embroidery shall be sewn on to the outermost layer of the garment only. Screen printed clothing must be accompanied by a manufacturer supplied [presentation form](#).

**Recommendations:** It is strongly recommended that:

1. All Occupants wear garments that comply with an approved standard wherever a choice is authorised, and
2. Careful consideration should be given when purchasing garments to any future progression through the various disciplines, and
3. Garments are 'loose fitting' as this increases the level of protection, and
4. Any badges sewn directly onto the overalls shall be 'Fire-Resistant' backed and attached using fire-resistant thread. Any embroidery shall be sewn on to the outermost layer of the garment only, and
5. The application of printing and/or iron-on patches should only be carried out by the manufacturer of the garment and must be flameproof and in conformity with FIA 8856-2000, and
6. Drivers of single-seater cars in races with standing starts wear gloves in a colour which contrasts with the predominant colour of the car, so that the driver can clearly draw the attention of the race starter in case of difficulties, and
7. Any rainproof garments designed to be worn over the overalls must not be made of flammable material (e.g. nylon or similar synthetics), and
8. Where a cool-suit is worn it must comply with FIA 8856-2000 or SFI 3.3A, or be worn in conjunction with FIA 8856-2000 or SFI 3.3A underwear between the cool-suit and the wearers body.

#### 4.4 Safety Harnesses:

**(1) Safety Harness Requirements:** All Safety Harnesses shall:

- (a) Be fitted as per the requirements of the Safety Harness Requirements Chart below, and
- (b) Comply with an Approved Standard, and
- (c) Only be used as a matched set, and
- (d) Be a four(4) strap (minimum) harness where a Safety Cage extends forward of the occupants, and any three(3) strap lap and diagonal belts shall be removed in their entirety.

SAFETY HARNESS REQUIREMENTS CHART				
EVENT TYPE	VEHICLE TYPE	HARNESS TYPE	STANDARD REQUIRED	HARNESS VALIDITY
<b>ALL EVENTS</b>	Single Seater Sports Racing Car	6 strap	FIA 8853.2016 <sup>2</sup> FIA 8853/98 <sup>1</sup> SFI 16.1 / 16.5	FIA up to 10 years <sup>3</sup> FIA up to 10 years <sup>3</sup> SFI <sup>4</sup>
<b>RACE EVENTS</b> Championship and Accredited Series and all <b>RALLY EVENTS</b> including Rallysprints and Targa	Series Production Vehicle Saloon GT Sports Car	5 strap (or 6 strap as above)	FIA 8853/98 <sup>1</sup>	FIA up to 10 years <sup>3</sup>
			SFI 16.1 / 16.5	SFI <sup>4</sup>
		4 strap (or 5 or 6 strap as above)	FIA 8853/98 <sup>1</sup> FIA 8854/98	FIA up to 10 years <sup>3</sup>
			SFI 16.1 / 16.5	SFI <sup>4</sup>
			ECE / R16 04 AS/NZS 2596	R16 04 and AS/NZS 2596 have no specified expiry <sup>5</sup>
<b>CLUBSPORT EVENTS</b> and all <b>RACE EVENTS</b> not defined above	All Vehicle Types (except where detailed otherwise above)	4 strap (or 4,5 or 6 strap harness as above)	FIA 8853/98 <sup>1</sup> FIA 8854/98 <sup>1</sup>	FIA up to 10 years <sup>3</sup>
			SFI 16.1 / 16.5	SFI <sup>4</sup>
			ECE / R16 04 AS/NZS 2596	R16 04 and AS/NZS 2596 have no specified expiry <sup>5</sup>
		3 strap (lap and diagonal)	NZTA accepted standards <sup>6</sup>	NZTA accepted standards have no specified expiry <sup>5</sup>

**Notes:**

- 1. FIA Std 8854 relates to a 4-strap harness, whereas FIA Std 8853 relates to a 5-strap and a 6-strap harness. Refer to Schedule A Part Two Article 4.2 for specific detail of the FIA Std label information.*
- 2. FIA Std 8853.2016 relates to a 6-strap harness that is also accepted in 7-strap, 8-strap and 9-strap configuration.*
- 3. The FIA Std dictates a validity of five(5) years (as detailed on a label attached to each individual strap, although under this Schedule, up to an additional five(5) years, may be applied to the expiry date (dependent upon condition) providing a maximum of ten(10) years use. This allowance is not applicable to Championship Series (excepting ClubSport status Championships), or where detailed otherwise in Class Regulations.*
- 4. SFI Std harnesses expire two(2) years from the date of manufacture. Harness labels produced prior to 31 Dec 2016 display manufacture date. From 01 Jan 2017 harness labels display validation expiry date.*
- 5. ECE/R16 04, AS/NZS 2596 and all NZTA accepted standards have no stated expiry, hence regular inspection of the harness condition must be maintained.*
- 6. The following standards are those accepted by NZTA and will be found on 3-strap lap and diagonal safety belts; NZS5401, AS2596, ADR, ECE16 / EEC16, BS AU 160, FMVSS 209, JIS D 4604.*

- (2) **Approved Safety Harness Standards:** Examples of the following standards are detailed in Part Two Article 4 of this Schedule.

- **FIA** – FIA8853.2016
- **FIA** – FIA8853/98 or FIA8854/98
- **SFI** – Spec 16.1 or Spec 16.5
- **European Standard (R16)** – ECE / R16 04
- **Other Standards** – NZS 5401, AS2596, ADR, BS AU 160, FMVSS 209, or JIS D 4604

- (3) **Safety Harness Use and Installation:** A safety harness must be used in its homologated or approved configuration without any modification or removal of parts, and in conformity with the manufacturer's instructions.

- (4) **Safety Harness Expiry:** The validity periods detailed herein are subject to the harness being regularly inspected for signs of damage, wear or aging and remaining in good condition. Any harness showing signs of damage, wear or aging shall be deemed non-compliant:

- (a) **FIA Standard:** Safety Harnesses may be used up to five(5) years after the validity date shown on the standards label under this Schedule. The safety harness shall be deemed to have expired if the expiry date on any label is no longer legible.
- (b) **SFI Standard:** Safety Harnesses used in any Event may be used up to two(2) years from the date shown on the standard label, for labels produced prior to 31 December 2016. From 01 January 2017 harnesses may be used to the validation date as displayed on the label.
- (c) **European Standard:** and Safety Harnesses manufactured to Other Standards – refer Part One Article 4.4(2) above, which have no specified expiry.

- (5) **Safety Harness Validity:** FIA standard harness manufactured after 01 January 2013 (expiry date of 2018 or later) must display the FIA holographic sticker integral with the

standards label on one(1) of the shoulder straps. For these harnesses the lack of the holographic sticker will invalidate the harness.

- (6) **Safety Harness Installation (four(4) or more straps):** Harnesses with four(4) or more straps shall be installed either on the series production anchorage points or by creating new anchorage points as per Part One Article 4.4(7):

(a) **Shoulder straps shall:**

- (i) Be of equal length (ideally 300mm to 400mm to the wearers shoulder. Excessively long straps should be avoided), and
- (ii) Respect the angles as described in Diagram 4.4(4) below. The maximum angles in relation to the centre line of the seat are 20° divergent or convergent, and
- (iii) Not be modified in any way, including the attachment of elastic retractors / cords.

(b) **Lap straps shall:**

- (i) Be worn over the hip joint region and under no circumstances shall they be worn over the abdomen, and
- (ii) Pass through or above the side of the seat and respect the angles as described in Diagram 4.4(4) below.
- (iii) Each lap strap should ideally be of a similar length and form similar angles.

(c) **Crotch straps shall:**

- (i) Pass through the seat base, and
- (ii) Be installed only where the harness is homologated in a 5-strap or 6-strap configuration, and
- (iii) Be installed in compliance with the stated standard or as instructed by the harness manufacturer.

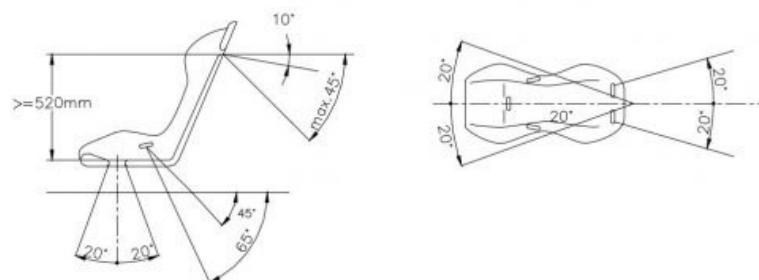
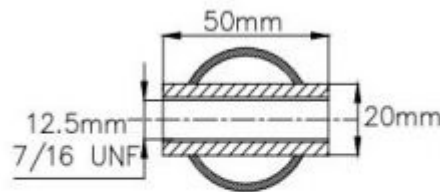


Diagram 4.4(4) Harness Strap Mounting Angles

- (7) **Anchorage:** The series production (existing) anchorage points may be used or new anchorage points created as follows. Straps shall not anchor directly to the seat, its frame / runners, or share fasteners with any other components:

- (a) Eyebolt (7/16"-20 UNF) fasteners shall be used for all vehicle types except for Single Seater vehicles where ISO 8.8 M8 fasteners are authorised, and
- (b) Each lap and shoulder strap must have individual anchorage points, and
- (c) For each new anchorage point created on the bodysell, a steel reinforcement plate three(3)mm thick and with an area of at least 40cm<sup>2</sup>(64mm X 64mm) with radiused corners, chamfered edges, and centrally located attachment hole that follows the panel surface shall be used. If the reinforcement plate is not welded to the bodysell a counter-plate shall also be used, and
- (d) For each new anchorage point created on the Safety Cage, the following methods of attachment are permitted:
  - (i) By looping the straps around a transverse (Safety Harness) bar homologated with the Safety Cage. It is advised to use a guide to prevent sideways movement. Additionally the straps may lean on an appropriately positioned transverse bar to enable the installation angles to be achieved, or
  - (ii) By eyebolts (7/16"-20 UNF) in combination with inserts welded in a transverse (Safety Harness) bar homologated with the Safety Cage (refer diagram 4.4(5) below), or
  - (iii) By eyebolts (7/16"-20 UNF) affixed to a flange consisting of a minimum 4mm thick steel plate, wrapped a minimum of 30% around the bar it is attached to, and
- (e) A 'stand alone' harness bar (for vehicles not fitted with a safety rollbar or safety cage) for the attachment of safety harness shoulder straps, is authorised under the following conditions:
  - (i) The bar shall be transversely mounted between the rear wheel arches on a horizontal plane and in a position that provides adequate strength and ensures the (strap) angles comply with diagram 4.4(4).
  - (ii) The material specification of the bar shall comply with Schedule A, Part Two Article 5.2.
  - (iii) The bar may be directly welded to reinforcement plates or bolted to reinforcement plates in combination with footing plates.
  - (iv) Reinforcement plates of minimum three(3)mm thick steel plates and 120cm<sup>2</sup> (per plate) shall be fully welded in full contact with the surface of the bodysell.
  - (v) If the bar is to be dismountable, footing plates shall be welded to the ends of the bar which in turn shall be bolted to the reinforcement plates welded to the bodysell using at least four(4) M8 x ISO 8.8 lock nuts and bolts at each end (refer Schedule A Part Two Diagram 5.5(3)).
  - (vi) The harness straps may be looped around the bar or inserts fitted as per diagram 4.4(5).

- (vii) The bar shall have an inspection hole of three(3)mm accessible to verify the tube thickness and the bar shall be validated by a licenced Scrutineer in the vehicles' logbook.
- (viii) For use on public roads, the bar must be detailed on a LVV / MotorSport Authority Card (refer Part One Article 8.3).



**Diagram 4.4(5) - Eyebolt Insert**

**Recommendations:**

1. When not in use Safety Harnesses should be kept in a dry and dark environment, and
2. Where a Safety Harness has been subjected to a severe crash loading it should be replaced. Where appropriate the Chief Scrutineer should notate the Vehicle Logbook recommending that the Safety Harness be replaced.

**Note:** It is recommended that where counter plates are used in combination with a reinforcement plate that the two pieces are also riveted together.

## 4.5 Window Nets and Racing Nets:

### (1) Window Nets:

(a) Are not considered mandatory under this Schedule except:

- (i) Where the driver's side window or passengers side window (if carrying a passenger) side window is not in a closed position; or
- (ii) If the window aperture adjacent to a seating position containing an occupant does not have a window.

(b) Where window nets are fitted, they shall comply with the following:

- (i) Window nets shall close the window aperture to the steering wheel, and
- (ii) Be approved to an SFI standard or FIA requirements having the following characteristics:

- Minimum width of the strips: 19mm,
- Minimum size of the meshes: 25 x 25mm,
- Maximum size of the meshes: 60 x 60mm, and

(c) Shall incorporate a 'quick release' system operable from both inside and outside the vehicle.

(2) **Driver Racing Nets:** Racing nets are not considered mandatory under this Schedule although where used shall be fitted in accordance with the manufacturers' instructions and incorporate a quick release system.



## 4.6 Safety Structures (Roll Protection):

- (1) Safety Structures are classified as 'safety critical' hence must be designed, fabricated and maintained to the highest standards. A Rollbar or a Safety Cage may be fabricated in compliance with the requirements of either this Schedule or FIA Appendix J. The structure may be permanently welded or alternatively may be bolted to the vehicle. It is highly recommended that this work be undertaken by a MotorSport NZ Recognised Manufacturer. For the design, construction requirements and material specifications refer to Part Two Article 5 of this Schedule.

**Note:** Additional information and a list of MotorSport NZ Recognised Manufacturers may be found on the MotorSport NZ website – [www.motorsport.org.nz](http://www.motorsport.org.nz)

- (2) **Requirements:** A Safety Rollbar or a Safety Cage shall be fitted as per the following chart:

Safety Structure Requirements Chart			
EVENT TYPE	VEHICLE TYPE	SAFETY CAGE	SAFETY ROLLBAR
RACE	All Open Vehicles and Closed Vehicles (not road registered)	Optional	Mandatory
	Closed Vehicles (road registered) <i>Refer Note 1</i>	Optional	Optional (but recommended)
	All Vehicles exceeding 2000cc capacity competing in an Accredited Series	Mandatory	–
RALLY	All Vehicles	Mandatory	–
CLUBSPORT ADVANCED (refer Notes 2 and 4)	All Open Vehicles	Optional (Refer note 2)	Mandatory
	All Closed Vehicles	Optional (Refer note 2)	Optional (but recommended)
CLUBSPORT BASIC (refer Notes 4 and 5)	All Open Vehicles	Optional	Optional (but recommended)
	All Closed Vehicles	Optional	Optional

### Notes:

1. Road registered vehicles fitted with a Safety Cage shall require a MotorSport/LVV Authority Card to obtain a WOF. (Refer Part One Article 8 of this Schedule).
2. Unless specified otherwise within Appendix Five Schedule C, ClubSport Advanced Status Events.
3. A homologated Safety Cage is mandatory when carrying a passenger.
4. Event Supplementary Regulations may impose higher requirements than the minimum detailed above.
5. For road registered vehicles with a current WOF and licence a non-homologated safety rollbar is accepted for ClubSport Basic Status events.

- (3) **Certification Requirements:** Homologation by MotorSport NZ is the certification process for all safety rollbars and safety cages and is a mandatory requirement for all vehicles competing under this Schedule, except single-seater and sports racing cars with a MotorSport NZ logbook issued prior to 31 December 2010 and vehicles competing in ClubSport Basic Events as detailed in the Safety Structure Requirements Chart above. The homologation certificate must be contained in the centre of the vehicle's MotorSport NZ

logbook.

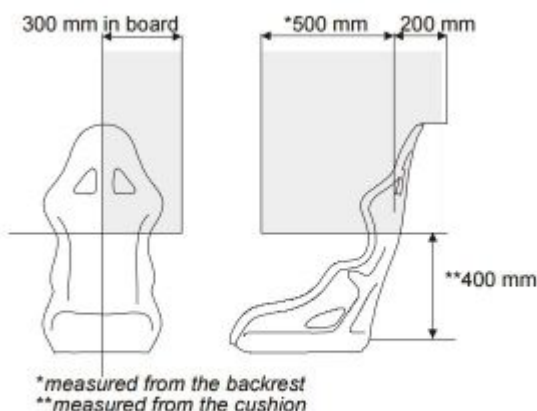
- (a) Application for homologation shall be made (on behalf of the vehicle owner) by the manufacturer / constructor of the safety structure.
- (b) Detail of the application process may be found in Part Two Article 6 of this Schedule.
- (c) On approval of any safety structure by MotorSport NZ, the applicant must arrange for an inspection of the structure by a senior Scrutineer or Technical Officer who will validate the certificate in the vehicle logbook.
- (d) Each safety structure approved by MotorSport NZ will be issued with a safety structure serial number and a decal will be supplied which must be attached to the safety structure. Any safety structure not identified by a serial number will be deemed invalid.

**(4) Homologation Validity and Safety Structures built to other regulations:**

- (a) Roll Protection Homologation previously issued by MotorSport NZ to regulations current at the time of certification shall remain valid, provided the structure remains in sound condition and compliant with either the original homologation certificate or any subsequent 'extension certificate' issued by MotorSport NZ.
- (b) Safety structures fitted to overseas vehicles that are being permanently imported for use in New Zealand may be accepted for homologation by MotorSport NZ provided the following is achieved:
  - (i) MotorSport NZ Technical Department is contacted prior to importing the vehicle to ensure acceptance of the vehicle is possible, and
  - (ii) A certification document is obtained from the sporting authority (ASN) of the country that the vehicle has been imported from that details; the safety structure, the vehicle chassis number, the material specification, and the constructor details, and
  - (iii) A logbook from the overseas sporting authority (ASN) as proof that the vehicle has been accepted and used for competitions under prescribed safety regulations, and
  - (iv) The structure is inspected and the Roll Protection Form is signed by an authorised MotorSport NZ Roll Protection Advisor, and
  - (v) For vehicles imported from a country where safety cage certification is a requirement supporting documentation must be provided that details; the safety cage constructor, the material specifications, the regulations the structure was constructed to and verification that the vehicle has been accepted for use in competition by the relevant sporting body.
  - (vi) Any vehicle seeking approval under this Schedule that does not meet the criteria detailed above will be required to prove suitability through Alternative Design including material identification testing and engineering calculation. (Refer Part Two Article 5.7).

- (5) **Modifications and/or Repairs:** Any modification and/or repairs to a homologated safety structure will invalidate the certification until an extension or repair homologation certificate is issued. The following procedures shall be followed:
- (a) In the first instance contact the MotorSport NZ Technical Department relative to proposed changes and/or repair of a homologated safety structure, and
  - (b) Modifications and/or repairs may only be performed by the original constructor or with their written permission or as authorised by MotorSport NZ.
- (6) **Protective padding:** shall be used on all members of the Safety structure that encroach on the occupant's head space (refer Diagram 4.6(6)) below). This padding shall be either:
- Non-flammable high-density energy-absorbing closed-cell foam (soft type) with a minimum wall thickness facing the occupants of 15mm, or
  - FIA – 8857-2001\* Standard padding (hard type), or
  - SFI – 45.1 Specification padding (hard type).

**Note:** \* denotes padding also approved for International status Events.



**Diagram 4.6(6) – Mandatory Area Requiring Protective Padding**

Additionally, it is recommended to fit protective padding where the occupant's bodies could come into contact with the safety cage. All padding shall be easily removable so that inspection of the Safety Cage is possible. The use of FIA8857-2001 / SFI 45.1 padding (hard type) shall be limited to the defined head space area only.

- (7) Where any doubt may exist as to the requirements for Safety Structures, advice should be sought from the MotorSport NZ Technical Department.

## 4.7

### Seating:

- (1) **Requirements:** Seats shall:
- (a) Be securely attached to the vehicle and adequately support the occupant(s) in competition, and
  - (b) Be installed in accordance with Part One Article 4.7(4), and
  - (c) Allow for the correct fitment / use of the Safety Harnesses.
- (2) **Seat Types:** All of the following seat types are accepted under this Schedule:

- (a) **Original Seat:** being a seat originally installed by the vehicle manufacturer to that particular vehicle model and type. All original seats shall comply:
  - (i) With the requirements of Part One Article 4.7(1)(a) and Article 4.7(1)(c).
- (b) **Replacement Seat:** being a seat sourced from another vehicle or manufacturer and is not compliant with an FIA or SFI standard. All replacement seats shall:
  - (i) Comply with the requirements of Part One Article 4.7(1), and
  - (ii) Incorporate a head restraint, and
  - (iii) Have no provision for adjustment of the seat back angle unless sourced from another Series Production vehicle.
  - (iv) A 3 strap lap and diagonal harness shall only be used with a 'replacement seat' where all three straps maintain full contact with the occupants body
- (c) **Competition Seat:** being a one(1) piece seat (with no provision for back rest adjustment), designed, constructed and tested to a standard published by the FIA or SFI. All competition seats shall:
  - (i) Comply with the requirements of Part One Article 4.7(1), and
  - (ii) Have a FIA or SFI standard/specification label, although the validity period of the applicable standard is not applied under this schedule.
  - (iii) Only 4 or more strap harnesses are authorised for use with a 'competition seat' or where the requirements of 4.7(2)(b) above cannot be met.
- (3) **Recognised Seat Standards:** The following standards are those recognised for competition seats:

<b>FIA:</b>	FIA 8855-1992
	FIA 8855-1999*
	FIA 8862-2009*
<b>SFI:</b>	SFI 39.1
	SFI 39.2

**Note:** \* denotes seats also approved for use in International status Events.

- (4) **Seat Installation and Mountings:**
  - (a) Original seats may retain their original mounts and fasteners.
  - (b) All Replacement and Competition Seats shall be mounted to seat brackets using at least four(4) (two(2) in the front and two(2) in the rear), self locking ISO 8.8 M8 bolts.
  - (c) All Seat brackets shall mount directly to the bodyshell/chassis or fabricated frame in four(4) locations (front right/left and rear right/left) using at least four(4) self locking

ISO 8.8 M8 bolts. Seat brackets shall have a minimum thickness of 3mm for steel or 5mm for aluminium.

- (d) The Seat brackets and/or fabricated frame shall:
  - (i) Mount directly to the vehicle manufacturers' original seat mounting points, or
  - (ii) Have alternative mounting points fabricated, each incorporating a reinforcement plate measuring at least 40cm<sup>2</sup> x 3mm. If the reinforcement plate is not welded to the bodyshell a counter-plate shall also be used, or
  - (iii) Have transverse tube members incorporating inserts, (and effective 01 July 2023, with a minimum wall thickness of 2.5mm) used in combination with reinforcement plates measuring at least 40cm<sup>2</sup> x 3mm which may be welded or bolted to the bodyshell in accordance with 4.7(4)(d)(ii). These members may attach directly to the Safety Cage in which case they must be detailed on the Safety Cage homologation. Where one(1) of these members terminates, either on the Safety Cage or at a reinforcement plate, welding shall be carried out throughout the entire perimeter of the member.
- (e) Adjustable (fore/aft) seat rails are authorised:
  - (i) where the original seat is retained, or
  - (ii) for Replacement Seats and Competition Seats, only where the authorised method of mounting as detailed in Part One Article 4.7(4)(d) above is impracticable, in which case a secure locking method is required on both rails.

**Recommendations:**

1. The use of seats manufactured to one(1) of the standards listed in Part One Article 4.7(3) is highly recommended.
2. The use of adjustable (fore / aft) seat rails are not recommended for replacement or competition seats where it is practical to use an alternative approved mounting method.
3. Selecting the correct seat size for the occupant is critical in ensuring the highest degree of safety.

**Note:** It is recommended that where counter plates are used in combination with a reinforcement plate that the two pieces are also riveted together.

#### 4.8 Fire extinguishers:

(1) **Requirements:** A fire extinguisher shall be fitted as per the following chart:

Fire Extinguisher Requirements Chart					
EVENT TYPE	APPROVED EXTINGUISHANT	TYPE	MINIMUM QUANTITY	MINIMUM FIRE RATING	SERVICE / VALIDITY
<b>Race and ClubSport Events except for: Autocrosses, Standing Sprints, Motorkhanas, Competitor Coaching and Sporting Trials</b>	Powder BE or ABE (refer Note 3)	Stored pressure with gauge (refer Note 1)	0.9kg	5 B	6 Years (refer Note 2)
	Foam AFFF / AR-ARFF / AR-FFFR		1.0litre	5 B	As per manufacturer's instructions
<b>Rally / Targa Events</b>	Powder BE or ABE (refer Note 3)	Stored pressure with gauge (refer Note 1)	2.0kg	20 B	6 Years (refer Note 2)
	Foam AFFF / AR-ARFF / AR-FFFR		2.4litres	20 B	As per manufacturer's instructions
<b>Any</b>	Foam AFFF / AR-ARFF / AR-FFFR	Plumbed-in System	2.2litres	N/A	As per manufacturer's instructions (refer Note 5)
<b>Rally FIA Groups</b>	Mandatory compliance with FIA Appendix J (refer Note 4)				

#### Notes:

1. All extinguishers must have a pressure gauge. The indicator must indicate in the operable range (usually a green sector on the gauge).
2. All extinguishers must be checked on a regular basis by the vehicle owner / competitor to ensure contents pressure and approximate weight requirements are met.
3. Dry Powder extinguishers should be agitated from time to time to ensure the powder has not compacted.
4. For information on FIA Homologated Plumbed-in Fire Extinguisher Systems refer to FIA Appendix J Art. 253-7 and FIA Technical List No. 16 for homologated systems.
5. Plumbed-in extinguishers shall respect the service / validity period displayed on the service label. Servicing of the extinguisher shall only be performed by an agent authorised to service that equipment

#### (2) Specific Vehicle Requirements:

- (a) All vehicles competing in a rally or rallysprint shall have a hand-held fire extinguisher as detailed in the Fire Extinguisher Requirements Chart. Additionally, a commercially available plumbed-in system is optional.
- (b) All other vehicles shall have either, a hand-held extinguisher or a commercially available plumbed-in extinguisher system installed in compliance with this Article.

- (3) Mounting / Location:** Extinguishers shall be installed in accordance with the following:
- (a)** For hand-held extinguishers, a metal retaining system, incorporating a minimum of two(2) quick-release metal straps, secured to the structure of the vehicle by a minimum of two(2) self locking ISO 8.8 M6 bolts with panel washers is required. All hand-held extinguishers shall be positioned within easy reach of the occupant/s while in their normally seated position (not mandatory for Single Seater vehicles).
  - (b)** For plumbed-in systems, each storage cylinder shall be installed with a minimum of two(2) metal straps and four(4) self locking ISO 8.8 M6 bolts with panel washers or in accordance with the manufacturers mounting instructions. The occupant(s) shall be able to trigger the extinguisher system while in their normally seated position. For closed vehicles, an external triggering device located at the base of the windscreen may also be fitted, and
  - (c)** Extinguishers shall be mounted so the gauge is visible at all times.
- (4) Service / validity requirements:**
- (a)** Plumbed-in extinguishers shall be serviced as per the manufacturer's instructions. The service must be performed by an authorised agent for that manufacturer. A valid service certificate shall be attached to the extinguisher at all times.
  - (b)** Hand-held extinguishers shall respect the validity date stamped on the vessel (dry powder), or have been serviced as per the manufacturer's instructions and exhibit a valid service label (foam AFFF / AR-ARFF / AR-FFFR).
- (5) General requirements:**
- (a)** All extinguishers shall be fitted with a pressure gauge which shall indicate in the operable range, and
  - (b)** For plumbed-in systems all triggering cables / wiring shall be in good condition, and
  - (c)** For plumbed-in systems the discharge nozzles shall be positioned as per the manufacturer's instructions and in the appropriate orientation, and
  - (d)** For plumbed-in systems all tubing / lines shall be metal (no plastic, rubber) and be adequately secured, and
  - (e)** It is the competitor's responsibility to ensure that the plumbed-in system is 'armed' prior to commencing competition, and
  - (f)** For plumbed-in systems if an external triggering mechanism is installed its location shall be clearly identified. (refer diagram below).



**Recommendations:**

1. It is recommended that where a plumbed-in system is installed a hand-held extinguisher is also installed in compliance with this Article.

2. For plumbed-in systems where there is a 'system test' function it is recommended that Scrutineers engage one of the crew to perform this test.

**Note:** It remains the competitor's responsibility to provide any documentation or proof that the extinguisher and/or its installation complies with the manufacturer's instructions.

**4.9 Wheels and Tyres:**

**(1) Wheel Requirements:**

- (a) On all vehicles, except Single Seater, the upper part of the wheel including tyre located above the wheel hub centre must be covered by the bodywork when measured vertically.
- (b) All wheels, including spares, and the fastening systems, shall be in good condition, free from cracking or other structural defects/damage.
- (c) Where fitted, only one(1) wheel spacer/adaptor (per wheel) is permitted, manufactured in a single piece, of maximum thickness 25mm and a diameter not less than the mating hub diameter. The use of high tensile wheel studs is recommended when using wheel spacers.
- (d) All wheel trims and covers shall be removed.
- (e) All wheels, both steel and Aluminium alloy, may only be modified in accordance with the wheel manufacturer's instructions.

**(2) Tyre Type:**

- (a) Tyre types are defined in Part One Article 2 of this Schedule and are classified as follows:
  - (i) Road Tyre, or
  - (ii) Treaded Tyre, or



(iii) Slick Tyre, or

(iv) Wet Tyre.

**(3) Tyre Requirements:**

(a) All tyres shall be in good condition with no obvious damage, and

(i) Shall be appropriately speed rated for the vehicle, and

(ii) Correctly fitted (orientation) to wheel rims that are dimensionally suitable for the tyre, and

(iii) Have grooves cut as permitted by the tyre manufacturer and no deeper than the original tread groove depth, and

(iv) Have no studs fitted.

(b) All Treaded/ Wet tyres shall have a minimum tread groove depth of 1.5mm as defined by the manufacturers tread depth indicators within all grooves around the entire circumference of the tyres road contact surface.

(c) All Slick tyres shall be restricted for use at Events held on permanent circuits, or Events where they are specifically authorised in the Event Supplementary Regulations which have been approved by MotorSport NZ.

(d) Space saver tyres and tyre pressure control valves are not permitted.

**4.10 Braking System:**

**(1) Requirements:** The brakes shall:

(a) Provide consistent braking action to all road wheels, and

(b) Have no components that are defective, loose, excessively worn or damaged in a way that could affect braking performance, and

(c) Have no creep or spongy feel to the pedal, and

(d) Have clean hydraulic fluid and no leaks, and

(e) Rigid brake lines shall be constructed of metal tubing (pure copper tubing is not authorised), and

(f) Flexible brake lines\* shall be of adequate length and correctly installed so that contact against other components will not occur, and

**Note:** *\*Refer to Part One Article 8 of this Schedule for additional requirements for road registered vehicles.*

(g) not restrict the braking effort on each axle to less than 25% of the total braking effort through the use of brake balance adjusters\*, and

- (h) Have an efficient hand brake; which is mandatory when a single circuit braking system is fitted and optional where a dual circuit braking system is fitted.

**Note:** \*Refer to Part One Article 8 of this Schedule for additional requirements for road registered vehicles.

- (2) **Hydraulic Handbrake Assembly:** A hydraulic handbrake assembly may be installed and shall:

- (a) Be securely attached to the vehicles structure taking account of the loadings and stresses that may be applied, and
- (b) Be free of sharp or jagged edges and mounted in a location that poses no danger to the occupants, and
- (c) Be plumbed independently of the vehicles main braking system, or if it is plumbed integral with the main braking system the installation and operation of the hydraulic handbrake shall not adversely affect the main braking system, and
- (d) Contain a mechanical stop, in addition to the master cylinder circlip, capable of preventing main brake system pressure forcing the master cylinder piston from the master cylinder.

#### 4.11 **Steering and Suspension Systems:**

- (1) The main components of the steering and suspension system include: steering rack/box, steering wheels, hubs, kingpins/ball joints, bearings, bushes, linkages, springs and dampers.

- (2) **Requirements:** These systems shall:

- (a) Provide a smooth steering action without tightness, roughness or excessive freeplay, and
- (b) Have no components that are loose, excessively worn, or damaged, and
- (c) All Dedicated Motorsport Vehicles shall have the steering column lock disabled or removed except for Series Production Vehicles with a valid licencing and WOF that are in possession of a current MotorSport NZ /LVV Authority Card.
- (d) Replacement Steering Wheels may be either a Series Production steering wheel sourced from a mass-produced vehicle or an after-market steering wheel manufactured by a reputable steering wheel manufacturer.

- (3) **Repairs and/or Modifications:** Any steering or suspension component subjected to welding or heating processes shall comply with the following:

- (a) Welding shall be limited to the MIG or TIG inert gas process and may not be altered in appearance in any way, and
- (b) Any welded and/or heated components shall be certified by either:

- (i) Non-destructive testing in compliance with AS/NZS 1554.1:2004 Standard (Tables 6.1 or 6.2) by a current NDT Level 2 (including CBIP, ASNT, AINDT) qualified technician, or
- (ii) Under LVVTA certification for modified suspension and steering, and
- (c) A test report verifying compliance with these requirements shall be presented if/when requested by a Scrutineer.

#### 4.12 Fuel Tanks, Fillers, Lines and Pumps:

- (1) **Requirements:** All tanks, fillers, lines and pumps shall comply with the following requirements:
- (a) All fuel tanks (including swirl pots and filters), fillers and pumps shall be isolated from the cockpit by a flameproof bulkhead or compartment, and
  - (b) The total vehicle storage capacity (all tanks) shall be limited to a maximum of 120Litres, and
  - (c) All tanks shall be securely mounted / retained within the confines of the bodywork, positioned so that they are protected during any impact, and
  - (d) Fuel fillers shall have a secure cap(s) that will prevent spillage, and be fitted on the outside of the bodyshell unless specifically designed for interior use, in which case shall have an externally drained spillage collar around the filler neck.
  - (e) Fuel tanks shall vent to the exterior of the vehicle and vents should include a gravity activated roll-over valve, and
  - (f) Fuel pumps shall only operate when the engine ignition is switched on, and
  - (g) Fuel shall only be carried in suitable tubing / hose, and
  - (h) Where fuel lines pass through the cockpit metal tubing or hose with either an outer or internal metal braiding shall be used and any joins in the fuel line shall be made with industry quality threaded connectors.

(2) **Fuel Tank Recognised Standards:**

<b>FIA:</b>	FT3 1999*
	FT3.5*
	FT5*
<b>SFI:</b>	28.1
	28.2
	32.1

**Notes:**

1. \* denotes fuel tanks also approved for use in International status Events provided the expiry date has not been exceeded.
2. Where a time limitation is part of the fuel tank standard it is not applied under this Schedule. These fuel tanks should be thoroughly inspected on a regular basis for signs of chafing, damage or aging that may affect their performance in service.

**(3) Fuel Tank Types:** The following types of fuel tank are authorised:

- (a) Series Production fuel tank (as fitted by original vehicle manufacturer), or
- (b) Safety Fuel tanks in compliance with a recognised standard, or
- (c) Fabricated fuel tanks provided the following requirements are met:
  - (i) The tank is professionally constructed, and
  - (ii) The tank is internally baffled and/or contains foam (ideally to MIL-B-83054B specification), and
  - (iii) All fabricated tanks manufactured after 1 January 2016 shall have a certificate of compliance and identification sticker attached to the tank, issued by the manufacturer or a testing authority detailing; the tank series/individual serial number, the material specification (minimum 1.6mm for aluminium or 1.0mm for stainless steel), the welding process and evidence that the tank has been subjected to a hydrostatic leak test at 50kPa gauge (7.25lbs/ins). Further information may be found on the MotorSport NZ website.
  - (iv) For existing tanks fabricated prior to 1 January 2016, that are in compliance with (i) and (ii) above, identification, inspection and a logbook notation shall be required by a licenced Scrutineer / Technical Officer, or the requirements of (iii) above shall apply.

**5. Safety Non Critical Items:**

**5.1 Engine, Transmission and Ancillaries:**

- (1) **General requirements:** The engine, transmission and ancillary components shall be kept clean and free of significant fluid leaks, and at all times be firmly secured to the vehicle chassis on mechanically sound mountings.
- (2) A fail-safe throttle mechanism shall be fitted, so that a failure in any part of the mechanism results in immediate throttle closure. Vehicles fitted with original equipment electronic throttle control are exempt from this requirement.
- (3) A starter motor shall be fitted, able to be operated by the driver when normally seated and capable of starting the engine by means of an onboard energy source.
- (4) A Reverse gear shall be fitted, able to be operated by the Driver when normally seated throughout an Event.
- (5) An external oil breather tank (Oil catch tank) shall be fitted to engines with open circuit crankcase breathing systems as follows:

- (a) Engines up to 2000cc (uncorrected) shall have a tank of at least one(1) litre capacity, and
- (b) Engines over 2000cc (uncorrected) shall have a tank of at least two(2) litre capacity, and
- (c) All such tanks shall be constructed of suitable materials that maintain their shape/capacity at all times.

## 5.2 Exhaust system:

- (1) **General Requirements:** All vehicles shall be fitted with an efficient and effective exhaust system that:
  - (a) Ensures noise emissions do not exceed 95dBA (refer Part One Article 3.8), and
  - (b) Is securely mounted to the vehicle, and
  - (c) Is isolated from the cockpit, either beneath the floor or surrounded by gas tight ducting, and
  - (d) Ensures all exhaust gases exit the perimeter of the vehicle behind the mid-point of the wheelbase except where an allowance is granted by MotorSport NZ and noted in the vehicle's MotorSport NZ Logbook.
  - (e) Turbo wastegate pipes shall exit the vehicle as per Article 5.2(d) above
  - (f) Does not protrude more than 150mm beyond the bodywork.

## 5.3 Service Fluid Lines:

- (1) **General Requirements:** All vehicles shall be fitted with lines (tubing and hoses) that are suitable for the specific fluid (fuel, oils, coolant and brake) being carried, and
  - (a) Connections shall be made using series fittings or industry quality threaded connectors, however, push-fit connectors may be used where they have been specifically designed for these applications, and
  - (b) Flexible hoses shall be used to join components of a fluid system where movement exists between them, and
  - (c) No fluid may be carried in or pass through tubes comprising part of the chassis or Safety Cage.
- (2) **Lines Located in the Cockpit:** All lines may be routed through the cockpit although this is not recommended for lubricating oils and/or coolants. The following conditions apply:
  - (a) Fuel and brake lines shall be appropriately rated, be metal (pure copper tube is not authorised for brake lines) or have a metal outer braiding and all joins shall be of a threaded or crimped industry quality type; and
  - (b) Fluid lines that carry coolant or oil shall:

- (i) Be metal or if they are non-metallic have internal or external metal braiding, and
- (ii) All joins shall have industry quality threaded connectors, and
- (iii) Have a minimum burst pressure of 70bar (1000psi), and
- (iv) Have a minimum peak operating temperature of 135°C (275°F) for coolant or 232°C (450°F) for oil, and
- (c) Breather lines shall be constructed from a material compatible with the system fluid, and
- (d) All lines shall be adequately located / shielded to avoid damage.

**Note:** *It is recommended to use threaded connectors where lines pass through bulkheads.*

#### 5.4 Electrical System:

- (1) **General Requirements:** Any vehicle incorporating an electrical system which may run at a voltage in excess of 60V, excluding ignition systems, shall display a warning sign as per Diagram 5.4 adjacent to the vehicle competition number.



**Diagram 5.4 High Voltage external Marking**

- (2) **Ignition Switch / Circuit Breaker (Kill Switch):** All vehicles shall be fitted with a spark proof ignition switch/circuit breaker as follows:
  - (a) It shall be capable of breaking all circuits that keep the engine running, including the ignition, fuel pump and alternator, and
  - (b) Series Production vehicles may retain the use of the original ignition switch where it meets all of the above requirements in (a), and
  - (c) Where the Series Production ignition switch is not used, one shall be positioned within reach of the occupant(s) (both) while in their normally seated position with harnesses worn.
  - (d) The ignition switch/circuit breaker shall be clearly identified (refer Diagram 5.4(1) below) except where the Series Production ignition switch is retained.

- (e) For Closed Dedicated Motorsport Vehicles competing in Race Events, an external ignition switch/circuit breaker shall be fitted, located near the bottom of the windscreen. It shall be marked by a red spark in a white edged blue triangle with a base of at least 120mm (refer Diagram 5.4(1) below).

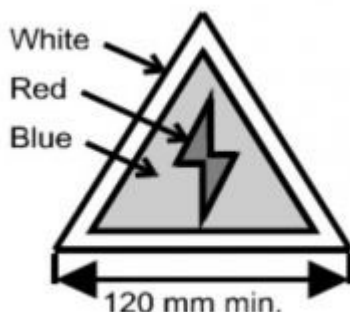


Diagram 5.4(1) - Circuit Breaker External Marking

## 5.5 Batteries: Are defined as follows:

- **‘Sealed Battery’** means a type that can be mounted and operate in any orientation without leakage, spillage or detriment to the battery, or
  - **‘Non-Sealed Battery’** means a type designed to be mounted and operate in one orientation only, where if it was mounted in any other orientation leakage, spillage or detriment to the battery could result.
- (1) For all batteries the live terminal shall be completely insulated, and
- (2) For Series Production Vehicles the following applies:
- (a) Where the original position and battery size/type is retained the original attachment method remains acceptable under this Schedule, or
  - (b) Where the original mounting position and/or battery size/type is changed the requirements of Part One Article 5.5(3) apply, or
  - (c) Where the original battery is located within the cockpit area and the interior is modified such that the battery is exposed Part One Article 5.5(3) shall apply.
- (3) For vehicles other than Series Production vehicles and for those detailed in Part One Article 5.5(2)(c) above, the battery shall:
- (a) Be mounted on a flat base, and
  - (b) Be securely retained by metal bracket / straps (insulated from the live terminal) that provide a positive location in all planes, attached with a minimum of four(4) M6 ISO 8.8 standard fixations or equivalent in combination with counter plates, or
  - (c) Alternatively, may be securely retained using a retention method that can be proven to withstand a force up to 25G.
- (4) Specifically, where a ‘non-sealed’ battery is installed in the cockpit:
- (a) It shall be secured as per Part One Article 5.5(3) above, and

- (b) It shall be contained in a leak/fume proof container, independently attached and vented to the exterior of the cockpit.
- (5) Where Lithium-Ion (Li-Ion) batteries are used as the main vehicle battery the following shall apply:
  - (a) The vehicle shall carry an external marking as detailed in Diagram 5.5 positioned adjacent to the competition number, and
  - (b) The battery must carry the appropriate disposal markings.

**Note:** *Care must be exercised to ensure that no rapid charging or discharging of the battery can occur that could instigate exothermic reaction within the battery.*



**Diagram 5.5 Li-Ion Marking**

**Recommendation:** *Where the battery is installed in the cockpit, the use of a 'sealed' [type] battery is highly recommended.*

## 5.6 Lighting Systems:

- (1) **Brake lights:** shall be fitted to all vehicles except Single Seater cars and shall be:
  - (a) Rear facing maintained in good working order, and
  - (b) Emit a red light of at least 21watts (each lamp) or equivalent LED.
- (2) **Rear Lights / Rain Lights:** shall be fitted as follows:
  - (a) For all circuit events all vehicles shall be fitted with either their fully operational Series Production rear lights in good working order, or red rear light/s that are;
    - (i) At least 15watts (each lamp), or equivalent LED, and
    - (ii) Clearly visible from the rear, and
    - (iii) Robust enough to operate throughout any event entered, and
    - (iv) Mounted within 100mm of the vehicles centre-line (except where more than one(1) lamp is fitted), and
    - (v) Able to be switched on by the Driver in their seated position.
  - (b) For vehicles used on public roads all rear lights / rain lights must maintain constant illumination.

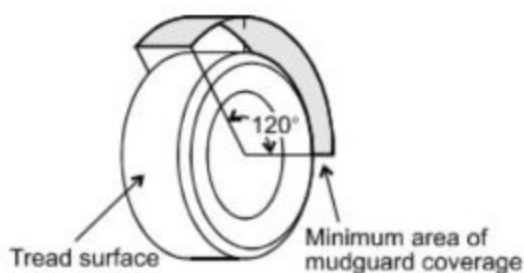
**Recommendation:** *It is recommended that where possible 21watt lamps, or equivalent or higher LED lights are used.*



**5.7 Wiring:** All wiring shall be in good condition, with adequate protection, be securely attached, and have all live terminals sufficiently insulated.

**5.8 Chassis, Bodyshell and Exterior Appearance:** The vehicle's chassis and bodyshell shall be:

- (1) Neatly designed, complete and finished without temporary elements to a professional standard, and
- (2) Be free of sharp edges, cracking, excessive corrosion, and
- (3) Prevent the entry of exhaust gases into the cockpit, and
- (4) Vehicles fitted with mudguards; the guard shall cover the tyre tread for at least one third (1/3) of its upper circumference. (Refer diagram 5.8 below).



**Diagram 5.8 - Minimum Tyre Tread Coverage**

**5.8.1 Composite / Carbon-Fibre Chassis and Structural Component Repairs:** Any repairs to the survival cell, nose crash structure, side crash structures or tail crash structure shall be carried out in accordance with the manufacturer's specifications, in a repair facility approved by the manufacturer.

**5.9 Engine Bonnets / Covers:**

- (1) Shall be attached using either:
  - (a) At least two(2) hinges in conjunction with either a two(2) stage fail-safe catch, or at least two(2) metal locking pins located in each non-hinged corner, or
  - (b) At least four(4) metal locking pins (one located in each corner).
  - (c) If both a catch and locking pins are used then an external release for the catch shall be fitted and be clearly marked.
- (2) Have any rear facing vents baffled (eg. Fine mesh gauze / open cell air filter foam, internal deflector plate), except where vents are as per the original Series Production Vehicle specification.

**5.10 Doors:** Shall comply with the following:

- (1) Closed Vehicles shall have a door on each side, with hinges and easily identifiable latches arranged for easy opening from inside and out, except where specifically authorised by MotorSport NZ as detailed in the vehicles MotorSport NZ logbook, and

- (2) All vehicles shall have internal door trim panels or suitable replacement panels fitted adjacent to the occupant seating position, that cover the internal door aperture and any exposed edges.
- (3) Series Production vehicles where the door structure has been modified including the removal of manufacturer installed protection bars shall have side intrusion bars homologated with the Safety Cage or shall have high density foam / energy absorbing core added to the door cavity.

**5.11 Windows:** shall meet the following requirements:

- (1) Vehicles with provision for windows shall have all of them fitted, and
- (2) All windows shall be free of scratching or significant cracks, and
- (3) The front windscreen shall have an effective method of demisting, either by ducting of air, hot wire elements, or have an anti-fogging coating applied, and
- (4) **Plastic windows:** of a polycarbonate or acrylic material are authorised under the following conditions:
  - (a) The front windscreen shall have a thickness of at least 4.5mm and a centrally located internal vertical metal support strap, and
  - (b) The side windows shall have a thickness of at least 3.0mm, and
  - (c) The rear window shall have a thickness of at least 3.0mm and at least two(2) evenly spaced external vertical metal support straps unless the material thickness exceeds 5.0mm or the material is bonded to the window aperture utilising an industry standard adhesive, and
  - (d) The metal support straps shall be at least 3.0mm x 25.0mm and be securely fastened at each end to the bodysell, and
  - (e) All windows shall be fitted as per their original mounting method or adequately secured to the vehicle.

**Recommendations:**

1. *It is recommended that side windows adjacent to any occupant should be able to be easily removed (without the use of tools) for easy egress.*
2. *It is recommended wherever possible to use Mar Resistant / Abrasion Resistant materials to ensure satisfactory performance and longevity.*

**Note:** Additional requirements apply to road registered vehicles, refer Part One Article 8.3(6)(f)

- (5) The use of tinted glass / plastic windows and or tint / safety film is authorised, provided that the visible light transmittance (VLT) is not reduced below 35% for side and rear windows and 70% for windscreens.
- (6) **Decals and Stickers and Overlays:** May only be applied to windows where they do not unduly affect the driver's vision. Specifically, the following conditions apply:

- (a) Directly applied to the:
  - (i) Front windscreen shall be limited to a maximum of 200mm from the top of the visible opening (excluding any anti-glare band overlays),
  - (ii) Rear window shall be limited to a maximum of 100mm from the top or alternatively from the bottom of the visible opening,
  - (iii) Rear side windows shall be limited to competition numbers and competitor names, and/or
- (b) As authorised under Part One Article 6.2 of the Schedule, and/or
- (c) Where specified by Series Regulations as authorised by MotorSport NZ.
- (d) Additionally a transparent overlay (tint film) may be applied to all side and rear windows provided the overall light transmittance is not reduced to below 35%.

**Note:** Road registered vehicles must comply with the glazing requirements of the VIRM (refer Part One Article 8).

- (7) Windscreen Wiper/s capable of clearing the front windscreen of water at all vehicle speeds shall be fitted to vehicles with a full height windscreen.

**5.12 Rear vision mirrors:** shall each have a reflective surface of at least 50cm<sup>2</sup>. The minimum requirements are as follows;

- (1) Single Seater and Sports Racing Cars shall be fitted with two(2) rear vision mirrors.
- (2) All other vehicles shall be fitted with at least one(1) rear vision mirror, mounted so that the driver has visibility to the rear and both sides of the vehicle.

**5.13 Aerodynamic Devices:** Any part of the vehicle that has an aerodynamic influence on stability shall be mounted on the entirely sprung part of the vehicle, be firmly affixed and not exceed the following limits:

**(1) Single Seater:**

- Height (max): 840mm above the ground.
- Width (max): 1100mm behind the front wheels (fuel tanks excepted).
- 1500mm ahead of and below the top of the front wheel rims.
- 1000mm ahead of and above the top of the front wheel rims.

**(2) Sports Racing Cars:**

**(a) Front:**

- Height (max): Top of wheel rims,
- Width (max): width of bodywork,
- Length: No more than 200mm forward of the original bodywork.

**(b) Rear:**

- Height (max): 840mm above the ground,
- Width (max): width of bodywork,
- Length: No more than 400mm rearward of the original bodywork.

**(3) All other vehicles:**

**(a) Front:**

- Height (min): bottom of wheel rims, or as per manufacturer's installed front bodywork,
- Height (max): Top of wheel rims,
- Width (max): no more than 50mm wider than the front wheel rim outer surface measured at axle height,
- Length: spoiler shall not extend more than 200mm forward of the original bodywork.

**(4) Rear:**

- Height (min): bottom of wheel rims,
- Height (max): 100mm above the vehicle roofline (Sports Cars measured from the top of the full height windscreen),
- Width (max): no more than 50mm wider than the rear wheel rim outer surface measured at axle height,
- Length: no more than 400mm rearward of the original bodywork.

**5.14 Vehicle Cockpit:** The cockpit shall be constructed and maintained to ensure the following:

- (1) The Occupants are able to exit the vehicle within seven(7) seconds from their normal seated position in race trim (all safety equipment worn/fitted), and
- (2) A tidy and finished appearance is maintained without sharp edges, and
- (3) The floor is complete with strong covers that totally isolate all moving parts, and
- (4) All service lines are in compliance with Part One Article 5.3(2) and vessels containing oils or coolant are adequately secured and externally vented, and
- (5) All electrical cables are adequately secured and protected from abrasion, particularly where they pass through bulkheads, and
- (6) For Open Vehicles, any passenger seat (tonneau) covers are flexible, unless they form part of the chassis.

**5.15 Towing Eyes:** Purpose Built and Dedicated Vehicles (except for single seaters) shall be equipped with front and rear towing-eyes as follows:

- (1) Have a load rating of not less than the gross vehicle weight, and
- (2) Have a minimum internal hole diameter of 40mm, and
- (3) Are coloured yellow, red or orange, and

- (4) Where not clearly visible, have their position clearly indicated by the word 'TOW' or an arrow in yellow, red or orange.

**6. Non Safety Items:**

**6.1 Ballast:** It is permitted to complete the weight of the vehicle by one(1) or several ballasts provided that they are unitary blocks secured to the floor of the cockpit. A minimum of M10 ISO 8.8 specification bolt per 10kg or part thereof shall be used in combination with counter plates of at least 75mm x 50mm x 3mm.

**6.2 Competition Numbers:** are required to make identification of vehicles easy for officials and shall comply with the following requirements unless specified in the Championship or Sanctioned Series Articles or Event Supplementary Regulations:

(1) For all cars competition numbers shall be displayed on each side of the vehicle and:

- (a) Be displayed in a durable manner and of a minimum size of 230mm high with a stroke width of 38mm, and
- (b) Be in a plain font on a contrasting background clear of graphics or signage that extends at least 50mm beyond the outline of the numbers, and
- (c) Be displayed alongside the cockpit, and
- (d) Contain a maximum of three(3) digits.

(2) For single seater and sports racing cars a forward facing number respecting the dimensions in Article 6.2(1)(a) above shall be displayed on the nose cone.

(3) For circuit based events closed vehicles and sports cars shall display a competition number on the top corner of the windscreen 150mm high with a stroke width of 20mm minimum.

(4) **Non-compliance and Protests:** Where a vehicle does not conform to the above requirements, the Organisers will not be responsible to furnish lap times or correct the placing of a vehicle in the official results. Additionally, protests shall not be lodged or accepted on the conformity of Competition numbers.

**6.3 Transmitting Devices:**

(1) **Timing Transponders:** The use of timing transponders is not mandatory but where authorised in Supplementary Regulations the following shall apply:

- (a) Unless otherwise stated the transponder shall be mounted securely on:
  - (i) For single seaters, shall be fitted to the bodywork rearward of the front axle centre line by up to a maximum of 100mm and within 200mm off the ground
  - (ii) For saloon cars, shall be fitted to the inner guard rearward of the front axle centre line by up to a maximum of 200mm and within 500mm off the ground.
  - (iii) The transponder shall have a clear view to the track with no metal or carbon fibre beneath it.

(iv) (Ensure that these cannot make contact with either the wheel assembly or the ground.

- (2) **Radio transmitters:** All radio transmitters used at Events shall be licensed as required under the Radio Communications (Radio) Regulations 1993. Information and licences can be obtained from Ministry of Commerce Radio Operations Regional Field Offices.

**6.4 Cameras:** All cameras fitted in or on a competing vehicle shall:

- (1) be of an appropriate type and size,
- (2) be securely mounted preferably using a mechanical means of attachment sufficiently robust to withstand vibration and stresses. Where suction mounts are used there must be a secure independent tether in addition.
- (3) not obstruct or interfere with the operation of any mandatory equipment,
- (4) cameras and their installation are always subject to the satisfaction of the appointed scrutineer.

**Recommendation:** *miniature sports type cameras are the preferred type.*

## **7. Rally Vehicles – Additional Requirements:**

### **7.1 Safety Critical Items:**

- (1) **Fuel, Oil and Brake lines and Brake cables:** fitted externally to the vehicle shall be protected from damage. Internal lines shall be protected from accidental damage.
- (2) **First Aid Kit:** shall be carried in each competing vehicle.
  - (a) The kit shall;
    - (i) Be housed in a robust container, and
    - (ii) Be readily accessible within the confines of the Safety Cage, and
    - (iii) Be able to be easily removed from the vehicle.
  - (b) The kit shall contain all items as detailed in Part Two Article 7 of this Schedule.
  - (c) The contents of the first aid kit are not required to be inspected during audit scrutineering provided that the kit:
    - (i) Is identified as having been supplied by St John or a Registered Chemist, and
    - (ii) Has a list of items that is externally visible, and
    - (iii) Is sealed in clear plastic which is intact, and
    - (iv) Which has not exceeded the expiry date.
- (3) **Safety (Warning) triangle(s):** A standards compliant (ECE-R27) triangle shall be carried in all competing vehicles. It shall be of free standing design and shall be located within the driving compartment and easily accessible.

- (4) **Emergency Sign (SOS / OK):** An emergency sign (SOS/OK) shall be carried in all competing vehicles (additional to that provided in the Road Book). It is to be located within the driving compartment and easily accessible. The emergency sign shall comply with the following:
- (a) Be of A4 size, the letters SOS in Red on one side, and the letters OK in green on the other side, both sides on a white background.
  - (b) Letters shall be of a size that fills the A4 page and use a plain font.
  - (c) Be weatherproof, ie. laminated, printed corflute or similar.

**Note:** refer also to Appendix 3 Schedule R Addendum R 6 and R 7.

- (5) **RallySafe:** where used shall comply with the following:
- (a) **RallySafe Display Unit:** shall be securely mounted to withstand significant impact within the occupants unobstructed area of vision.
  - (b) **RallySafe 12v Power Supply:**
    - (i) The yellow power cable must be wired directly to the vehicle battery separate from the ignition switch and the isolator switch to ensure the unit remains powered at all times including in case of accident. It is recommended that a 5amp fuse is installed in the yellow power cable.
    - (ii) The black earth cable must be grounded to earth.
    - (iii) The grey, blue and white wires must be configured and insulated to avoid shorting.
    - (iv) There must be at least 300mm of free cable at the display unit end to allow for connecting to and positioning of the display unit.
  - (c) **RallySafe Antennas:** The location and mounting of antennas is critical to the system performance. The correct location of antennas shall take priority over other systems.
    - (i) A permanent bolt-on (preferred) or temporary stick-on external roof mounted antenna is required. The antenna shall be securely mounted on the exterior of the roof in a central position.
    - (ii) The internal Wi-Fi antenna shall be installed vertically inside the vehicle, facing either up or down, at least 200mm clear of safety cage members or any obstructions.
  - (d) **Cables, leads and wiring:** shall be installed as follows:
    - (i) Antenna leads shall not be coiled anywhere along their length.
    - (ii) Leads shall be free of cuts or crushing.
    - (iii) Leads must not be secured between the safety cage and the bodyshell.

- (iv) For the temporary stick-on antenna the lead must be checked to ensure there is no crushing where it passes through any door / window opening.
  - (v) There must be at least 300mm of free cable at the display unit end to allow for connecting to and positioning of the display unit.
- (6) **Harness cutters:** shall be installed for each seating position within easy reach of the occupants in their normal seated position.

## 7.2 Safety Non-Critical Items:

- (1) **Transverse Mudflaps:** shall be fitted to all competing vehicles that cover the whole width / height of the wheel / tyre, for the rear and the driving wheels (FWD) when viewed from the rear of the vehicle. Not mandatory for vehicles competing in solely tarmac Events. The mudflaps shall;
  - (a) Be in place at the commencement of the first special stage and following every service, and
  - (b) Have a ground clearance of 50mm to 100mm when the vehicle is stationary, and
  - (c) Must maintain function and operation at all times.

**Recommendation:** *A minimum thickness of 4mm is recommended for flexible material.*
- (2) **Tow rope:** All competing vehicles shall carry a tow rope.
- (3) **Spare Wheels / Tyres:** A maximum of two(2) spare wheels may be carried in the competing vehicle. All spare wheels shall be securely fastened to the vehicle structure as follows:
  - (a) Bolted through the wheel centre utilising at least an M10 ISO 8.8 specification bolt (per wheel) in combination with an external reinforcement plate, or
  - (b) Using a certified cargo strap anchored to suitable anchorage points, or
  - (c) When the wheel is located in the vehicle's original placement, the manufacturer's original fastening method may be retained.
- (4) Slick tyres are not permitted unless specifically authorised in Event Supplementary regulations for Special Stages held on permanent circuits.
- (5) **Additional Headlamps:** where fitted, shall either comply with the requirements of the VIRM as published by the NZTA, or as follows:
  - (a) Shall only be mounted during an Event, and
  - (b) Shall be wired and switched independently to the vehicle's standard headlamps, and
  - (c) Shall only be switched on at the start of a Special Stage and shall immediately be switched off at the end of a Special Stage, and
  - (d) Shall be disabled at all other times, and



- (e) Be attached to the vehicle in a way that does not represent a hazard to pedestrians.

### 7.3

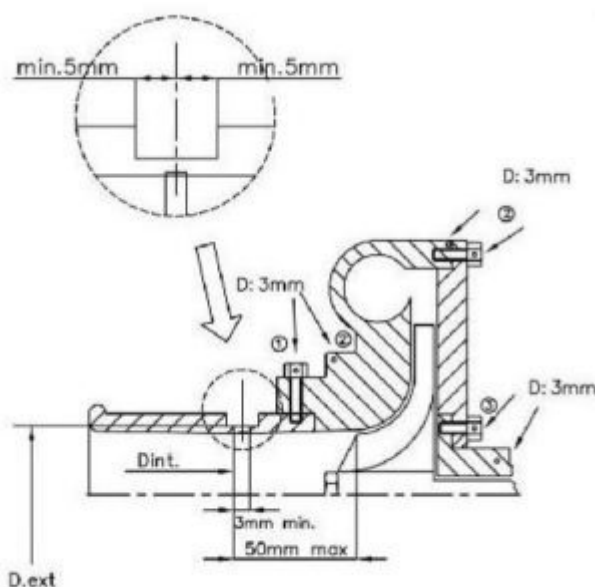
#### Non-Safety Items:

- (1) **Turbocharger and Supercharger Restrictors:** All four wheel drive vehicles fitted with forced induction engines, 1800cc or over, competing in all Rallies excepting those vehicles complying with Part One Article 7.3(1)(c) below, shall be fitted with a restrictor that complies with either:
  - (a) The specification for 36mm diameter restrictors (refer Part One Article 7.3(2) below), or
  - (b) The requirements of the vehicle's FIA Group / Class, or
  - (c) Specifically for such vehicles competing in Tarmac Rallies, where the Organiser has stipulated a maximum speed of 200kph, the requirement to fit a restrictor as detailed in Part One Article 7.3(1) (a) or (b) above is optional.
- (2) **Specification for 36mm diameter restrictor:** All air necessary for feeding the engine shall pass through the restrictor, which shall comply with the following:
  - (a) Maximum internal diameter = 36mm. The internal diameter shall be:
    - (i) Maintained for a minimum distance of 3mm measured downstream of a plane perpendicular to the rotational axis situated at a maximum of 50mm upstream of a plane passing through the most upstream extremities of the wheel blades, and
    - (ii) Complied with, regardless of the temperature conditions.
  - (b) Maximum external diameter = 42mm, measured at the narrowest point of the restrictor and 5mm to each side thereof. (Refer diagram 7.3 below).
  - (c) The restrictor must be attached to the compressor housing of the turbocharger either by:
    - (i) Welding the restrictor to the compressor body, or
    - (ii) The use of at least two(2) screws which have to be entirely removed from the body of the compressor, or from the restrictor, to detach the restrictor. The screw heads must be drilled (3mm holes) for the application of sealing wire.
  - (d) The restrictor must be made from a single material.
  - (e) The restrictor must have provisions made for sealing wire to be applied between:
    - (i) The restrictor (or the restrictor/compressor housing attachment),
    - (ii) The compressor housing (or the housing/flange attachment), and
    - (iii) The turbine housing (or the housing/flange attachment).

Notes:

- 1. *The restrictor may be drilled for the sole purpose of mounting and sealing.*

2. It is permitted to remove material from and add material to the compressor housing for the sole purpose of attaching the restrictor onto the compressor housing.
3. In case of an engine with two(2) parallel compressors, each compressor must be limited to a maximum intake diameter of 25.5mm and have an external diameter that does not exceed 31.5mm.



**Diagram 7.3 - Restrictor Detail Applicable to Forced Induction Vehicles used in Rallies**

**(3) Optional Equipment:**

- (a) **Underbody protection:** may be mounted under the vehicle for the sole purpose of preventing damage. Additionally, soft flexible material may be fitted longitudinally between the wheel arches provided it is contained within the bodyshell silhouette when viewed from above.
  - (b) Radio receivers/transmitters and crew intercoms may be installed.
- (4) Vehicle Weights:** All vehicles competing in Tarmac Rallies shall be subject to the following minimum weights. Weights shall be inclusive of spare wheel/tyre(s), safety equipment and all fluids. Vehicles may be weighed at any time during an event.
- (a) **4WD vehicles:** not fitted with a restrictor in accordance with Part One Article 7.3(1)(c) above, shall respect the kerbside weight as published by the manufacturer. This shall be referenced from [www.carfolio.com](http://www.carfolio.com)

(b) **All other vehicles:** shall respect the lesser of:

- (i) The manufacturers kerbside weight (referenced from [www.carfolio.com](http://www.carfolio.com)) if utilising the vehicles original engine, or
- (ii) After applying the applicable equivalence factor(s) the following weight relative to the vehicle's engine capacity:

0-1300cc	700kg
1301cc – 1600cc	760kg
1601cc – 1800cc	840kg
1801cc – 2500cc	920kg
2501cc – 3500cc	1050kg
Over 3500cc	1150kg

## 8. Use of Motorsport Vehicles on Public Roads:

*All vehicles used on public roads including those specifically modified for use in motorsport competition shall comply with the requirements of the VIRM as published by the NZTA in conjunction with the requirements of this Article.*

**Note:** *The Transport (Vehicle and Driver Registration and Licensing) Act 1986 requires both registration plates, of the correct type and size, to be displayed on the front and rear of the vehicle.*

### 8.1 Registration, Licensing and Warrant of Fitness requirements:

- (1) Vehicles used for Events on roads (open to the public) shall:
  - (a) Be registered as a motor vehicle (under Class G as evidenced on the registration label), and
  - (b) Have a vehicle licence label valid for at least the duration of the Event affixed to the front windscreen, and
  - (c) Have a Warrant of Fitness label valid for at least the duration of the Event affixed to the front windscreen, and
  - (d) The use of 'dealer plates' and/or "A" or "E" class registration is specifically prohibited.

**Note:** *Vehicles used for Events that are held entirely on private venues, or roads not open to the public for the duration of the Event are only required to comply with (a), (b) and (c) above, when this is a class eligibility requirement.*

### 8.2 Vehicles modified before 1992:

- (1) Vehicles modified for motor sport competition and issued with a 'modification declaration certificate' by MotorSport NZ prior to 1992 may continue to use these certificates (as proof of compliance) to gain a WOF provided that;

- (a) The vehicle hasn't been modified further since the declaration was issued, and
  - (b) The vehicles registration has not lapsed.
- (2) If the vehicle has been modified further and/or the registration has lapsed, the modification declaration certificate is no longer valid and an Authority Card and/or LVV Certification will be required to gain a WOF.

### 8.3

**LVV / MotorSport Authority Card:** All (motorsport) vehicles used on public roads that have any (or all) of the dedicated modifications as detailed in Part One Article 8.3(4) below are required by law to hold an Authority Card. The Authority Card system for motorsport vehicles is accepted in Law under the Land Transport Compliance Rule and is administered by MotorSport NZ under the Low Volume Vehicle Code. The Authority Card is a certification document, issued by MotorSport NZ that specifies the alternative safety related equipment required by a vehicle, for purposes of motor sport competition.

- (1) The card is issued in the name of the MotorSport NZ Licence holder and details the vehicle and the applicable modifications.
- (2) The card must be presented during a WOF inspection.
- (3) The Authority Card is proof that a vehicle modified for motorsport purposes complies with alternative standards (to those of the original manufacturer) that are authorised under Section 2.12 of the LVV Code.
- (4) The Authority Card covers the following motor sport modifications:
  - The installation of safety harnesses (four(4) or more straps in contact with the wearer)
  - The installation of a safety cage that extends forward of the Occupants
  - Modifications that affect the vehicle manufacturers interior impact standards
  - The installation of a hydraulic handbrake assembly and/or braided flexible brake lines
  - Open (adjustable) brake bias system
  - The removal of a 'manufacturer installed' occupant protection system including the fitment of competition seats
  - The installation of plastic windows to the side and rear
  - The installation of a safety fuel tank and/or installation of dry break refuel adapters inside the cockpit, and/or replacement fuel lines
  - The permanent disabling of a 'manufacturer installed' Electronic Stability Control System
  - FIA Homologated Rally Cars in full compliance with their homologation papers and used in New Zealand Rally Championship or International rally events.

**Note:** *Application details for an Authority Card or the renewal of an Authority Card may be found in Part Two of this Schedule.*

#### (5) General Requirements:

- (a) The Authority Card is only available to current MotorSport NZ Competition or Entrant licence holders.
- (b) The Authority Card is issued to the licence holder for a particular vehicle – it is not transferable. Subsequent owners of the vehicle must apply for a new card.

- (c) Authority Cards are valid for the duration of the holder's licence (being a maximum of 12 months), after which a renewal is required.
- (d) The vehicle shall have a valid MotorSport NZ logbook.
- (e) The vehicle is required to be used in at least two(2) MotorSport NZ permitted events every 12 months, which shall be detailed in the vehicles logbook.
- (f) The vehicle shall be inspected by a MotorSport NZ Technical Officer or 'A' designated licensed Scrutineer as part of the application process and thereafter under the Safety Audit inspection program at motorsport events.
- (g) The Authority Card shall be presented as and when requested by MotorSport NZ officials, law enforcement authorities and/or their agents (at the time of entry certification and/or Warrant of Fitness inspection). If the card is not presented, agents are required to fail the vehicle.
- (h) **Application for an Authority Card:**
  - (i) **New application:** Application for a new Authority Card should be made by application through the MotorSport Online system including payment of the prescribed fee, (refer Appendix One Schedule B for details), or alternatively by using the current application form available from the MotorSport NZ Administration office or website ([www.motorsport.org.nz](http://www.motorsport.org.nz)).
  - (ii) **Renewal:** Application for renewal of an Authority Card should be made by application through the MotorSport Online system including payment of the prescribed fee, (refer Appendix One Schedule B for details), or alternatively by using the current form available from the MotorSport NZ Administration office or website ([www.motorsport.org.nz](http://www.motorsport.org.nz)), provided the vehicle has been subject to a Safety Audit inspection in the preceding six(6) months prior to renewal.

**(6) Specific Requirements:**

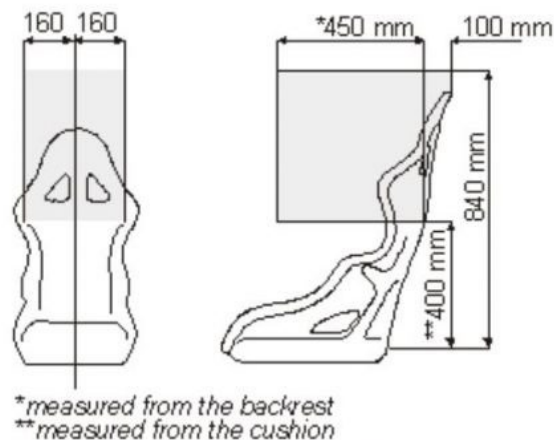
- (a) **Safety Harness:** Where a safety harness of four(4) or more straps (in contact with the wearer) is fitted to a vehicle an Authority Card is required. The following requirements shall be met:
  - (i) The safety harness shall comply with a recognised standard and shall be labelled according to the standard, and
  - (ii) The safety harness shall be in good condition, and
  - (iii) The anchorages shall comply with the requirements of this Schedule, and
  - (iv) The harness shall allow the use (by the driver) of all mandatory vehicle controls from the belted-in driving position.
- (b) **Safety Cage:** Where a Safety Cage is fitted to a vehicle an Authority Card is required (refer Note 1 below). The following requirements shall be met:
  - (i) The Safety Cage shall comply with the requirements of this Schedule, and

- (ii) The structure should not intrude into the occupant's headspace as defined in diagram 8.3 below, and
- (iii) Protective padding that complies with the requirements of this Schedule shall be fitted and additionally shall be fitted to any side intrusion bars where they are not shielded by the seat structure, and
- (iv) Have safety harnesses (minimum four(4) strap) fitted to the front seating positions in compliance with this Schedule, and
- (v) Any rear seating positions shall be removed or not used to carry passengers, and
- (vi) Any three(3) strap (lap and diagonal) safety belts (refer Note 2 below) shall be completely removed.

**Notes:**

1. An Authority Card is not required for a Rollbar that is entirely contained behind the front seating positions and does not intrude into the Occupants headspace as defined in Diagram 8.3. below.

2. Three(3) strap lap and diagonal safety belts may be retained where a Rollbar is fitted that is entirely contained behind the front seating positions.



**Diagram 8.3 - Headspace requirements.**

- (c) **Modified Interior:** Any modification performed to the interior of a vehicle that may affect the safety of the occupants (or the original manufacturer's interior impact standards), an Authority Card is required. The following requirements shall be met:
  - (i) Additional fixtures, fittings and instruments (e.g. halda, terratrip) shall have no sharp edges or projections, and
  - (ii) Anti-glare hoods shall be easily deformable, and
  - (iii) Internal door panels adjacent to the occupant seating positions shall remain in place, or be replaced by a suitable one-piece alternative panel that covers any sharp projections or exposed edges, and
  - (iv) Where four(4) (or more) strap safety harnesses are fitted then any additional instruments and/or switchgear shall be installed so that they are not less than 450mm from the driver's seat backrest, with the seat in its forward-most position, or

- (v) Where three(3) strap (lap and diagonal) safety belts are fitted (only permitted where roll protection is entirely contained behind the front seating positions such as a rollbar) then any additional instruments and/or switchgear shall be mounted in a way that is comparable with the manufacturers original equipment, and any additional panels shall be no more rigid than the existing dash panel, or shall be padded with energy absorbing foam, and
  - (vi) Replacement / Competition seat/s shall be in full compliance with the requirements of this Schedule.
- (d) **Removal of a Manufacturer Occupant Protection System (MOPS):** from a vehicle (primarily used for motor sport competitions) may be authorised under the Authority Card system. The vehicle shall be fitted with and comply with the following:
- (i) A minimum of a four(4) strap safety harness in full compliance with this Schedule shall be fitted to both front seating positions, and
  - (ii) At a minimum, a full Safety Cage, in compliance with Schedule A, Part One, Article 4.6 and Part Two, Article 5.1 through 5.5 as per diagrams 8.3(6)(d) below, and
  - (iii) Competition seats, compliant to an FIA standard (8855-92, 8855-99, or 8862-2009) and in full compliance with this Schedule, and
  - (iv) The airbag system shall be entirely removed including its operating system, all triggering sensors, and warning lamps, and
  - (v) The steering wheel shall be replaced by a conventional direct replacement steering wheel that requires no modification to the steering column shaft to permit its fitment, or if the original fitment wheel is retained, have the cavities that formerly housed the airbag unit filled with energy absorbing foam, and
  - (vi) The original manufacturer installed safety belts shall be completely removed.
  - (vii) A warning notice (available from the MotorSport NZ Administration office) shall be applied in a position that may easily be read by the driver detailing the following: **“Warning – This vehicle is no longer fitted with a manufacturer installed frontal impact protection system.”**

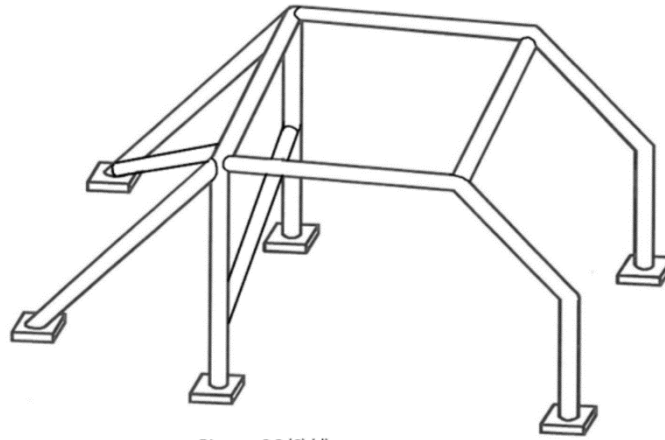


Diagram 8.3 (6) (d)

- (e) A competition braking system incorporating a Hydraulic Handbrake, “Open” brake bias system and/or braided flexible brake lines (hoses). Where a hydraulic handbrake is fitted to a vehicle an Authority Card is required and where braided flexible brake lines are fitted in replacement of solid metal brake lines an Authority Card is required, and where a brake bias system is fitted where the Adjuster is open an Authority card is required. The following requirements shall be met:
  - (i) The handbrake shall be specifically designed for use as a handbrake, and
  - (ii) The handbrake shall be professionally constructed and securely attached to the vehicle’s structure, and
  - (iii) The handbrake shall have an easy method of locking the lever in the park position, and
  - (iv) The handbrake shall be capable of holding the vehicle on a 1 in 5 slope or stopping the vehicle within 18 meters from 30kph, and
  - (v) The handbrake shall not interfere with the operation of the service brake system, and
  - (vi) The handbrake shall be maintained in good operating condition, and
  - (vii) A warning notice (available from the MotorSport NZ Administration office) applied in a position that may easily be read by the driver detailing the following: **“Warning – This vehicle is fitted with a hydraulically operated parking brake that cannot be relied on to hold the vehicle for an indefinite period. When left unattended the vehicle’s wheels must be chocked.”**
  - (viii) Braided flexible brake lines shall be of a type specifically designed and intended for automotive application. The lines must have crimped or swaged ends and must be compliant to the requirements of the VIRM, and
  - (ix) Braided flexible brake lines shall be securely attached and located so that chafing with other components will be avoided and be of adequate length to avoid any undue tension being imposed upon the line, due to steering and suspension movement.
  - (x) An open adjuster on a LVVTA Certified brake bias system is permitted.



**Note:** *The brake bias system modification itself, be that hydraulic valve or mechanical bar, must be approved separately on an LVVTA Certification Plate. If the vehicle has not been LVV Certified or the LVVTA Certification Plate does not detail the Brake Bias System the vehicle does not meet WOF requirements and should not be issued with a WOF.*

- (f) **Plastic Windows:** fitted to a vehicle may be detailed on an Authority Card provided the following requirements are met:
- (i) The plastic windows are only fitted to the side and/or rear (not the front screen), and
  - (ii) The material is of an approved polycarbonate type, being Lexan MR10 or Cyrolon AR2 or a LVVTA accepted rigid plastic material, and
  - (iii) They are mounted securely to the vehicle, and
  - (iv) They comply with the requirements of this Schedule.

**Note:** *Plastic windows may also be certified under the Low Volume Vehicle Code.*

- (g) **Competition Fuel Systems:** that include a safety fuel tank and/or dry break refuel adapters installed within the cockpit and/or replacement fuel lines may be detailed on the Authority Card providing the following requirements are met:
- (i) The safety fuel tank shall comply with a recognised FIA standard or SFI specification and shall be labelled accordingly, and
  - (ii) The safety fuel tank is of either a flexible bladder or semi rigid (polymer) type construction, and
  - (iii) The safety fuel tank is fully isolated from the cockpit by a leak proof fume proof cover / compartment, and
  - (iv) The safety fuel tank must remain in good condition and if the tank exceeds any expiry date must be inspected for signs of; deterioration, delamination, chafing or wear that could impede its safety, and
  - (v) The safety fuel tank must be securely mounted within the confines of the bodyshell, positioned so it is protected from any impact, and
  - (vi) Dry break refuel adapters shall be a commercially available item manufactured for the purpose and shall be in good condition being free from damage and signs of leakage. Any associated lines and fittings shall comply with Appendix Two Schedule A.
- (h) **Electronic Stability Control:** that has been permanently disabled may be detailed on the Authority Card providing the following requirements are met:
- (i) The electronic stability control warning light on the drivers dash panel must remain illuminated on completion of system self-test, or if there is no warning light visible a warning decal must be prominently displayed that advises the driver that the ESC system is not operating, and

- (ii) The ABS system remains functional and the ABS self-test passes. If the ABS self-test fails, the ABS will need to be detailed on the LVVTA Cert Plate.
- (i) FIA Homologated Rally Cars: imported and used in the NZRC or International rally events providing the following requirements are met:
  - (i) The car maintains complete compliance with its homologation papers and technical regulations at all times.
  - (ii) The car must be used primarily for New Zealand Rally Championship events or International permitted events.
  - (iii) The car must be inspected each year prior to Authority Card renewal.
  - (iv) If the car fails to meet the above requirements, certification through LVVTA will be required.
- (j) **Other Vehicle Modifications:** All other modifications to those detailed in Part One Article 8.3(4) that affect compliance under the VIRM must be certified under the Low Volume Vehicle Code. For further information contact the Low Volume Vehicle Technical Association directly ([www.lvvta.org.nz](http://www.lvvta.org.nz)).

# APPENDIX TWO

## SCHEDULE A – DRIVER AND VEHICLE SAFETY

Last updated: 6 December 2021

Page 1 of 28

Amendment Number	Date published	Date implemented	Article Number
<a href="#">36043</a>	6 December 2021	6 December 2021	Article 5
<a href="#">36013</a>	9 January 2020	9 January 2020	Article 5

### Part Two

<b>Article 1</b>	Application Process for a LVV / MotorSport Authority Card
<b>Article 2</b>	Frequently Asked Questions for a LVV / MotorSport Authority Card
<b>Article 3</b>	Fuel Specification Chart
<b>Article 4</b>	Standards Labels
<b>Article 5</b>	Safety Structures (Roll Protection)
<b>Article 6</b>	Homologation Application Process for Safety Rollbars and Safety Cages
<b>Article 7</b>	First Aid Kit Contents

**Note:** Amendments will be **visually highlighted** for a duration of 12 months starting from the implementation of each amendment. Text changes made for grammatical and/or formatting purposes will not be subject to highlighting.

## Part Two

### 1. **Application Process for a LVV / MotorSport Authority Card:**

All MotorSport NZ competition licence holders are eligible to apply for an Authority Card.

### A. **Reference Appendix Two Schedule A, Part One Article 8.3:** For vehicles modified for competition use that are required to be used on public roads. The Authority Card covers the following elements / modifications\*:

- Safety harnesses (with 4 or more straps)
- Safety Cage (that extends forward of the front seat Occupants)
- Modifications that effect the interior impact regulations
- Removal of an SRS airbag system
- Braided flexible hydraulic brake lines
- Hydraulic handbrake assembly
- Open brake bias system
- Plastic windows
- Safety fuel tanks / Dry Break Refuel Adapters
- Removal of Stability Control System

\*for other modifications refer to the LVV Code.

### B. **Application Process:** For all applications (new card and renewal):”

- Make application through the MotorSport NZ online system including payment of the required fee.
  - (for new or initial card applications) print off the Inspection report
  - Contact an 'A' Scrutineer or Technical Officer through your Car Club to organise an inspection of the vehicle.
  - The Scrutineer / Technical Officer will complete the relevant sections of the application form.
  - Scan and email (or post) the completed form to the MotorSport NZ Administration Office.
  - The card will normally be processed and issued within one(1) working week.

**Note:** *Application may also be made using Authority Card Application (form T007) from the MotorSport NZ website*

### C. **Application Requirements:**

- You must have a current MotorSport NZ Competition Licence or you must apply for one at the same time as the Authority Card.
- You must have a current MotorSport NZ Vehicle Logbook or you must apply for one at the same time as the Authority Card.

### D. **Conditions of Use:**

- The Authority Card is valid for the duration of the applicants Competition Licence, hence when the licence expires so does the Authority Card.
- The vehicle must be used in a minimum of two(2) permitted events per year.
- The vehicle shall be maintained to Appendix Two Schedule A requirements at all times
- If there are any additions to the modification categories as detailed on the card, a new card application must be made.
- If ownership of the vehicle changes, a new card application must be made.

## **2. Renewal Process for a LVV / MotorSport Authority Card:**

### **A. Requirements:** The following requirements must be complied with in order to apply for an Authority Card renewal:

- Either make application through the MotorSport Online system including payment of the required fee or alternatively, obtain a renewal application form T008 from the MotorSport NZ website ([www.motorsport.org.nz](http://www.motorsport.org.nz)).
- Confirm the Competition Licence is still current.
- Confirm that the vehicle has been used in a minimum of two(2) documented (refer logbook entries) events and has been Safety Audited within the past six(6) month period (or a new application is required).
- Confirm the vehicle details are still current (eg. No changes have been made).
- Confirm the modification categories (as detailed on the existing card) are still current.
- Confirm vehicle ownership has not changed.
- If not making application through the MotorSport Online system, mail the completed form (with the appropriate fee) together with the vehicle's MotorSport NZ logbook to the MotorSport NZ administration office.
- The renewal will normally be processed and a new card issued within one(1) working week from date of receipt.

### **B. Authority Card Frequently Asked Questions:**

#### **Why / When do I need an Authority Card?**

An Authority Card is required to certify dedicated motorsport modifications and is used to obtain a WOF

#### **What are the basic conditions?**

The applicant must hold a current MotorSport NZ Competition licence and the vehicle must comply with the alternative standards and be used in a minimum of two(2) motorsport events per year.

#### **Am I the only person who can drive the vehicle?**

Use of the vehicle is not restricted solely to the applicant (the licence holder who the Authority Card has been issued to) although it does remain their responsibility.

#### **How long is the card valid?**

The Authority Card remains valid concurrent with the applicant's licence. This will normally be 12 months if the card is applied for at the same time as the applicants Competition licence, although it will be less if applied for during the validity of the Competition licence; as it will expire at the same time as the licence.

#### **Why do I have to renew the card (every year)?**

This is because the Authority Card runs concurrently with the holders Competition licence and this ensures (as per the agreement between MotorSport NZ and the NZTA) that only current licence holders may have such specialist exemptions. It also ensures the applicant takes responsibility for the condition and maintenance of their vehicle relative to the modifications listed.

#### **My vehicle has 'other' modifications that are not included on the card?**

The Authority Card only covers 'dedicated' motor sport modifications hence all other applicable modifications should be covered under the LVV Code and detailed on a 'certification plate' attached to the vehicle.

#### **What if I add or delete any of the modification categories on the vehicle (that is detailed on the card)?**

A new application is required which will entail a physical inspection to be performed by an 'A' Scrutineer. All items on the card will be checked for compliance.

**If nothing is changed on the vehicle and I renew the card every year will I ever need to have the vehicle inspected again?**

Yes, this will happen automatically as part of the Safety Audit system performed at events.

### 3. Fuel Specification Chart:

#### Engine Fuel Specification Chart

Reference Appendix Two Schedule A, Part One [Article 3.9\(2\)\(a\)](#)

Property	Test Method	Unleaded Petrol	Leaded Petrol	Diesel
Density	ASTM D1298 or ASTM D4052	Not a Specification		0.820 Minimum 0.850 Maximum
Research Octane Number (RON)	ASTM D2699	108 Maximum		
Motor Octane Number (MON)	ASTM D2700	100 Maximum		
Cetane Index				51 Minimum
Percentage Volume evaporated at 70°C (E70)	ASTM D86	22% Minimum 50% Maximum		
Percentage Volume evaporated at 100°C (E100)	ASTM D86	45% Minimum 71% Maximum		
Percentage Volume evaporated at 150°C (E150)	ASTM D86	75% Minimum		
End Point (°C)	ASTM D86	210°C Maximum		
Lead (mass of lead per litre of gasoline)	IP224	5 mgPb/L Maximum		
	IP270		0.85 gmPb/L Maximum	
Benzine (% volume)		1% Maximum		
Ethanol (% volume)		10% Maximum	0.01% Maximum	
Other Oxygenates (% volume)		1% Maximum		
Olefins (% volume)		18% Maximum		
Manganese (mg/L)		2mg/L Maximum		
Phosphorus (mg/L)		1 mg/L Maximum		

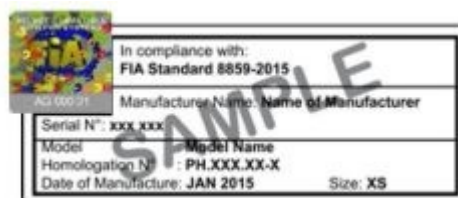
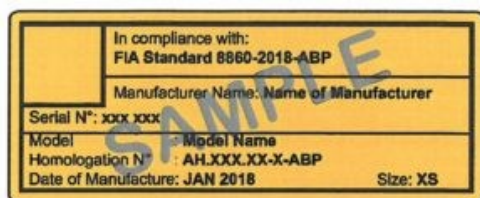
## Engine Fuel Specification Chart

Reference Appendix Two Schedule A, Part One Article 3.9(2)(b)

Property	Test Method	Ethanolic Blends
<b>Base Gasoline</b>		Minimum 15%V Maximum 90%V
<b>Ethanol Content</b>	ASTM D5501	Maximum 85%
<b>Methanol Content</b>	ASTM D5501	0.5%V Maximum
<b>Water Content</b>	ASTM E203	1.0%V Max.

### 4. Standards Labels: 4.1 Helmet Standards:

#### (1) FIA Standards Label:



#### (2) Snell Standards Labels:





(a) Kart Helmet Labels:



(b) Youth Helmet Labels:



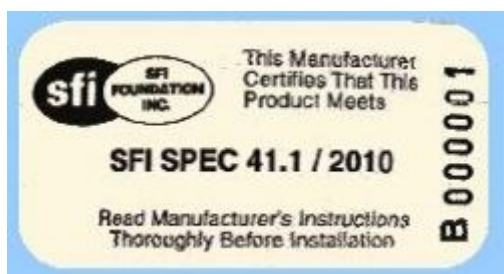
(3) British Standards Labels



(4) SFI Standards Labels:







(5) European Standard Label:



(6) Australian Standard Label: (example)



(7) FHR Standards / Labels:



In compliance with  
FIA standard 8858-2002

Manufacturer: Restraint Company  
Model: RCB-001



## 4.2 Safety Harness Standards / Labels:

### (1) FIA Standards Labels:



Homologation Number given by the FIA

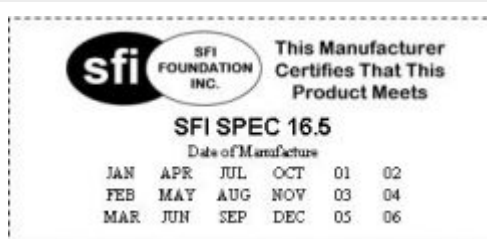
- Letter "T" for a buckle, which opens by turning
- Letter "P" for a buckle with a push button opening system

**FIA B-000. T/98**

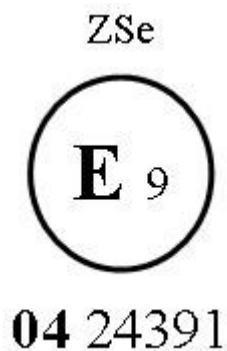
- "B" for a harness in which 4 straps are in contact with the drivers body
- "C" for a harness in which 5 straps are in contact with the drivers body
- "D" for a harness in which 6 straps are in contact with the drivers body

Year of the Standard

### (2) SFI Foundation Standard Labels:



4.3 European Standard Label:



4.4 Competition Seat Standards / Labels:

(1) FIA Standards Labels:

 APPROVED	In compliance with: <b>FIA Standard 8862-2009</b>
	Manufacturer: <b>Seat Company</b>
	Model: <b>SFR-8E</b>
Homologation No: <b>AS.XXX.XX</b>	
Serial No: <b>NOT VALID AFTER:</b>	

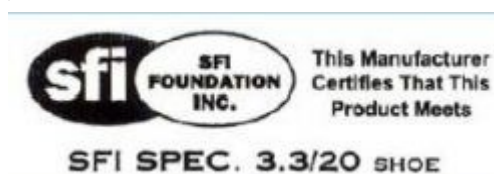
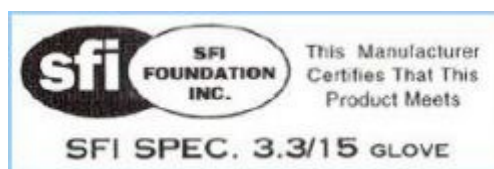
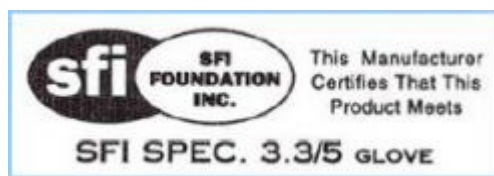
	In compliance with : <b>FIA Standard 8855-1999</b>
	Manufacturer Name : <b>Name of Manufacturer</b>
Serial n° : <b>xxx xxx</b>	
Model : <b>Model Name</b>	
Homologation N° : <b>CS.xxx.xx</b>	
Date of Manufacture : <b>MAY 2012</b>	



(2) SFI Foundation Standard Labels:







## 5. Safety Structures (Roll Protection):

- 5.1 **Design Specification:** The function of a Safety Cage is to reduce the risk of serious injury to the Occupants during competition. The ability of a Safety Cage to provide protection is dependent upon the quality of design and construction. The following essential design specifications shall be incorporated:
- (1) Longitudinally, the structure shall be entirely contained within the confines of the front and rear shock absorber bodyshell mounts (excluding Single Seater and Sports Racing Cars), and
  - (2) For closed vehicles the structure must be as close fitting to the interior profile of the bodyshell as practical, and
  - (3) Members of the structure must not unduly impede the entry, exit, or access to the Occupant(s) of the vehicle, and
  - (4) Members of the structure must respect the headspace requirements designated by the shaded area in Diagram 8.3 in Part One. For all open vehicles the height of the main rollbar shall be at least 50mm above the top of the helmet of the normally seated Occupant(s) (refer diagram 5.1 below), and
  - (5) Where used all fasteners must be self locking M8, ISO 8.8 or greater, and
  - (6) No fluids may pass through any tubing forming part of the Safety Cage, and

- (7) Each Safety Cage must be identified by means of an identification number (being the MotorSport NZ Homologation number) or a plate permanently affixed by the manufacturer bearing the name of the manufacturer, the MotorSport NZ homologation number, and the individual serial or series number of the structure; this ID plate must neither be moved or copied.
- (8) The structure must be designed to suit the particular vehicle application respecting the aforementioned design specifications.

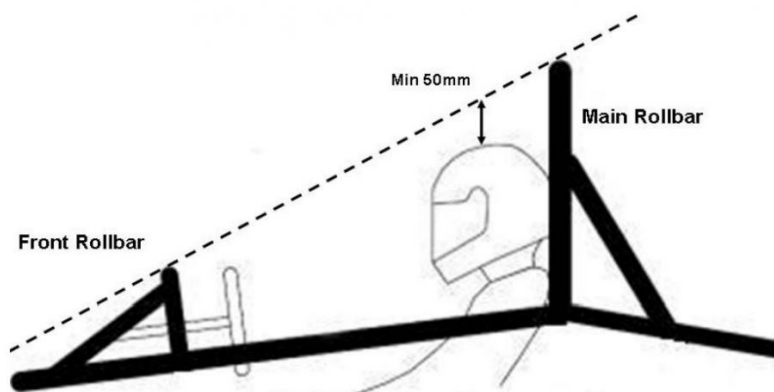


Diagram 5.1 - Open Vehicle Main Rollbar Height

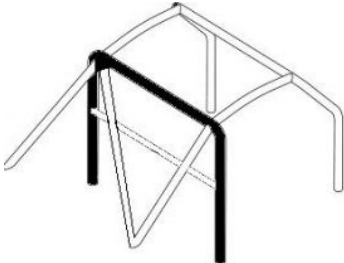
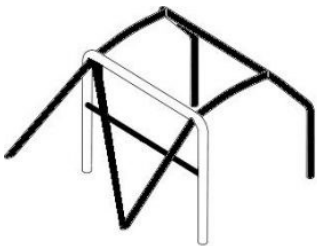
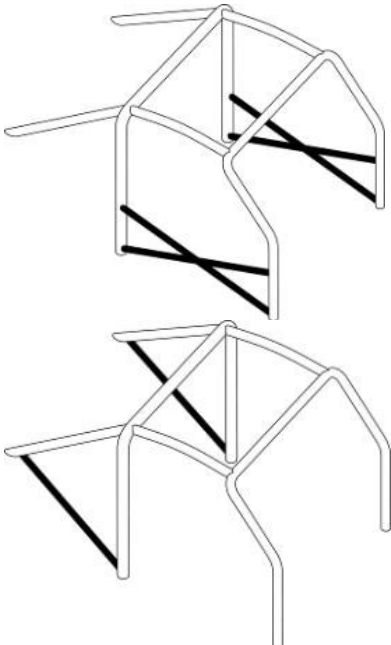
**5.2 Material Specification:** The only materials authorised under this schedule for safety cage construction are defined in the Material Specification Chart below. Aluminium alloys are specifically prohibited and the use of ASME 4130 / BS4T45 alloy steel tube is restricted solely to MotorSport NZ registered safety cage manufacturers who have been granted 'MotorSport NZ Recognised Manufacturer' status. If in any doubt as to the selection of an approved/authorised material, contact the MotorSport NZ Office in the first instance prior to the commencement of construction.

## Material Specification Chart

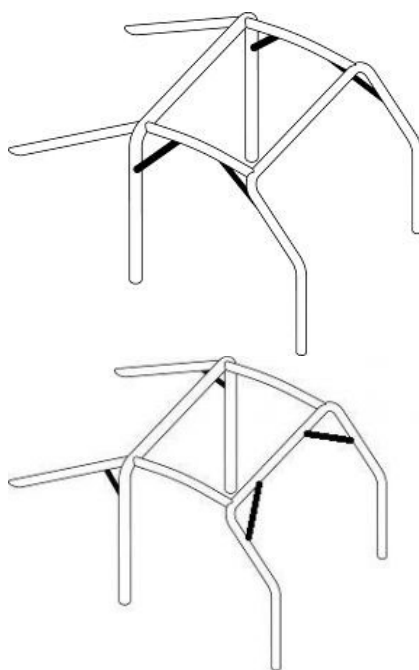
All Constructors: Tubes manufactured in compliance with the MSNZ-Q29 Steel tubes for Safety Structures standard.

MotorSport NZ Recognised Manufacturers only: Cold Drawn Seamless alloy steel tubes manufactured in compliance with the ASME 4130 standard or BS4T45.

**Note:** Any structure manufactured from materials that do not meet the following dimensions must be approved under Part Two [Article 5.7](#) 'Alternative Design'.

Member Description	Member Diagram	Minimum Tube Dimensions	
		NZTM-Q29 or ITM-MSNZ-Q29 Standard	*ASME 4130 and *BS4 T45 (refer * above)
Main Rollbar		44.5 x 2.5mm Or 50 x 2.0mm	44.5 x 2.5mm Or 50 x 2.0mm
Other members of the principle structure including safety harness bar		38.1 x 2.5mm	38.1 x 2.5mm
Optional members more than 300mm in length (examples shown)		38.1 x 2.5mm Or 40 x 2.0mm	38.1 x 1.6mm Or 40 x 1.6mm

Gusset bars less than 300mm in length (examples shown)



30 x 1.5mm

30 x 1.5mm

### 5.3

#### Welding:

- (1) All welding shall be of the highest possible quality and preferably using a gas-shielded arc. Although good external appearance of a weld does not necessarily guarantee its quality, poor appearance is never a sign of good workmanship. Grinding welds to alter the appearance is not permitted.
- (2) Where a member of the Safety Cage terminates at another member or a reinforcing plate / mounting foot / footing box, welding shall be carried out around the entire perimeter of the tube. Mandatory for all principle structures. For optional members where this is impracticable 'best welding practices' must be observed.
- (3) Where attaching reinforcing plates to the bodyshell, 20mm stitch welding is permitted.

### 5.4

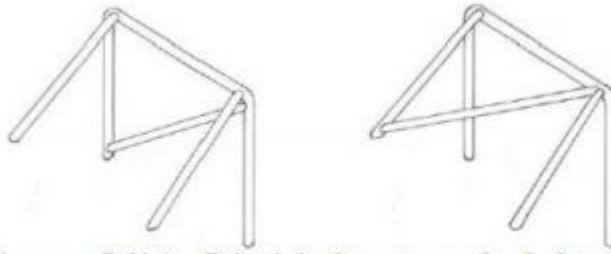
#### Construction Specification for Series Production Vehicles:

**Note:** Refer to Part Two Article 5.6 for Construction Specifications specific to Single Seaters, and Sports Racing Cars.

##### (1) Principal Structure:

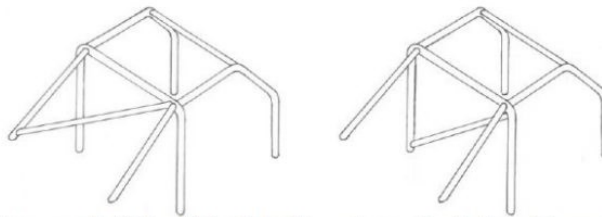
- (a) **Safety Rollbar:** A Safety Rollbar must comprise of the following members: a Main rollbar, two(2) Backstays, and one(1) of the Diagonal (installed in either location) as defined by Diagram 5.4(a) below.





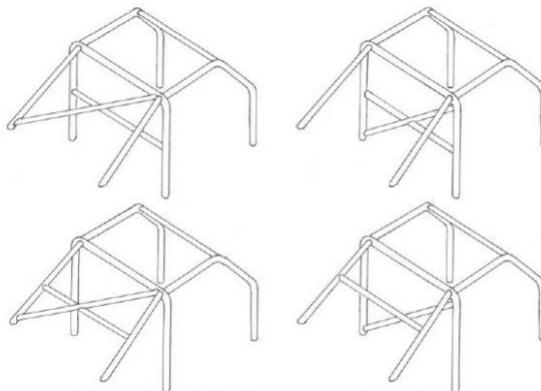
**Diagram 5.4(a) – Principle Structure of a Safety Rollbar**

- (b) Safety Cage (homologated before 1 January 2013):** The Safety Cage must comprise of the following members: a Main rollbar, two(2) Lateral rollbars, a Windscreen bar, two(2) Backstays, and one(1) Diagonal (installed in either location) as defined by Diagram 5.4(b) below.



**Diagram 5.4(b) – Principle Structure of a Safety Cage pre 1 January 2013**

- (c) Safety Cage (homologated after 1 January 2013):** The Safety Cage must comprise as a minimum of the following members: a Main rollbar, two(2) Lateral rollbars, a Windscreen bar, two(2) Backstays, one(1) Diagonal (installed in either location) and a Safety Harness bar/s (installed in either location) as defined by Diagram 5.4(c).



**Diagram 5.4(c) – Principle Structure of a Safety Cage post 1 January 2013**

## **(2) Main and Lateral rollbars:**

- (a)** These frames must be constructed from one(1) piece of tube with a smooth and even appearance free of ripples or cracks. They shall be bent by a cold working process and the centre-line bend radius must be at least three times (3x) that of the tube's outside diameter. Ovalisation of the bends, being the ratio of minor to major diameters, shall be 0.9 or greater.

- (b) The vertical part of the main rollbar must be as straight and as close as possible to the interior profile of the bodyshell.
  - (c) For Safety Cages homologated after 1 January 2013 the Main rollbar shall be within  $\pm 10^\circ$  from vertical when viewed from the side.
  - (d) The front leg of a Lateral rollbar must follow the windscreen pillar and have only one(1) bend in its lower vertical part. The connection of the Lateral rollbar to the Main rollbar shall be at roof level and the lower attachment at the floor must not be rearward of the forwardmost part of the lateral bar.
- (3) **Backstays:** These tubes shall be straight and of one(1) piece construction. They shall be attached within 100mm of the centre of the top outer bends of the Main rollbar on both sides of the vehicle and ideally should intersect the Main Rollbar at the same point as the Front Lateral Bar. They must make an angle of at least  $30^\circ$  with the vertical, and be as **close** as possible to the interior side-panels of the bodyshell.
- (4) **Diagonals:** These tubes shall be straight and as a minimum one(1) diagonal member shall be fitted, or, two(2) diagonals shall be fitted providing the two(2) bodyshell mounts are at least  $60\text{cm}^2$  in area less than 400mm apart, in accordance with Diagram 5.4(4) below. In all cases at least one(1) diagonal shall be of one(1) piece construction though it is permissible to use multiple diagonals in combination (refer diagram 5.4(4) below). The lower end of all diagonal members shall join the main rollbar or backstay within 100mm of the mounting foot/reinforcement plate.

The upper end of all diagonal members shall join either the Main rollbar or Backstay within 100mm from the junction of the Backstay.

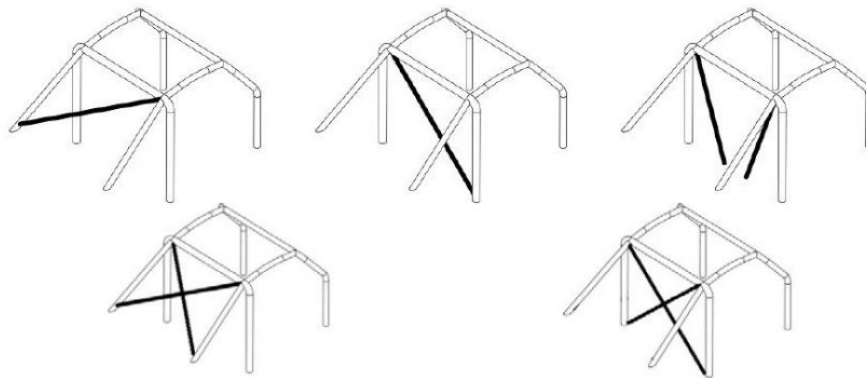
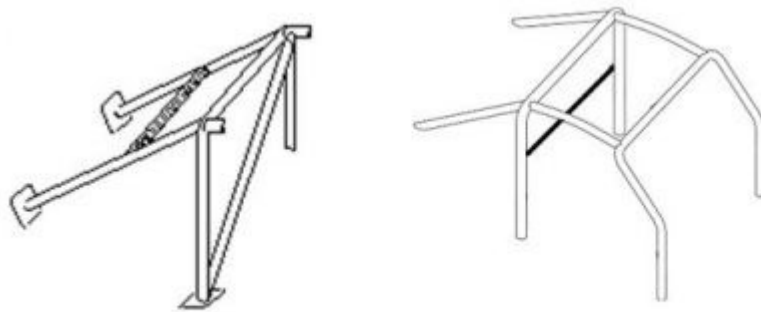


Diagram 5.4(4) - Diagonals

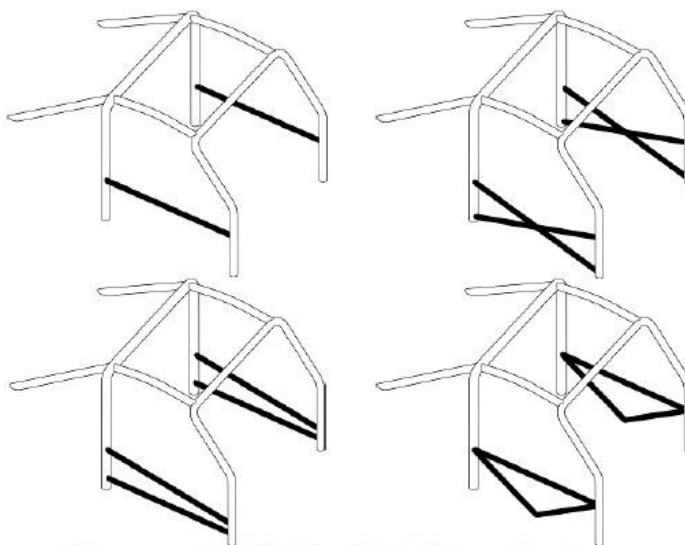
- (5) **Safety Harness Bar:** Shall be a transversal reinforcement welded between either the backstays, the vertical legs of the Main rollbar or another member of the structure where the material specification meets the minimum requirements for members of the principle structure (e.g. Diagonal bar). Refer to Part Two Article 5.2 Material Specification Chart for material size and specification.



**Diagram 5.4(5) - Safety Harness Bar examples**

**(6) Side Intrusion bars:**

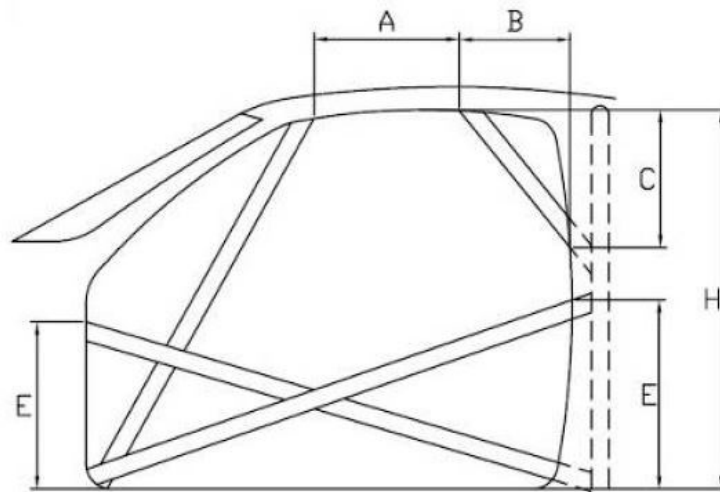
- (a)** It is recommended that at least one(1) or more longitudinal tubes may be fitted at each side of the vehicle (refer *Diagram 5.4(6)(a)* below).



**Diagram 5.4(6)(a) - Side intrusion bars**

- (b)** Where the door has been modified (refer Part One Article 5.10) and a Safety Cage is fitted at least one(1) Side Intrusion bar shall be fitted to that side of the vehicle.
- (c)** These bars shall be as high as possible, but the intersection of the highest member and the door opening (dimension 'E') shall not exceed half the total height of the door aperture (dimension 'H').

In the case of side intrusion bars in the form of a "X" (refer Diagram 5.4(6)(a) above), it is recommended that the lower attachment points of these members be fixed either to the Main rollbar or forward Lateral rollbar at the footing or reinforcement plate.

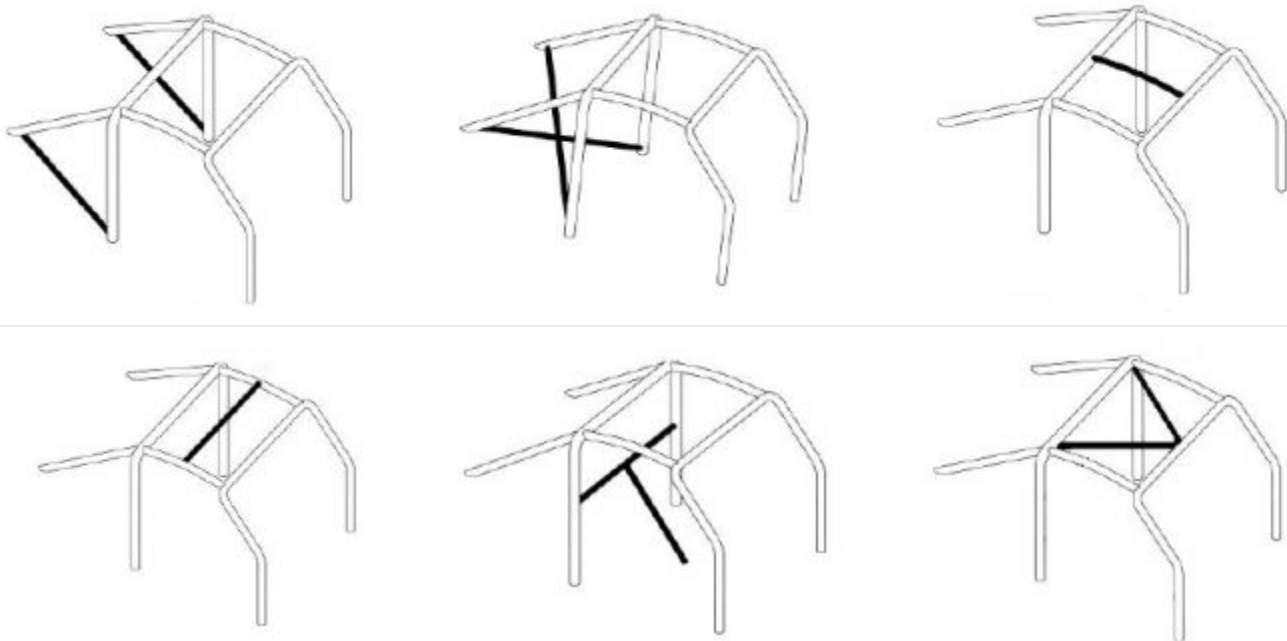


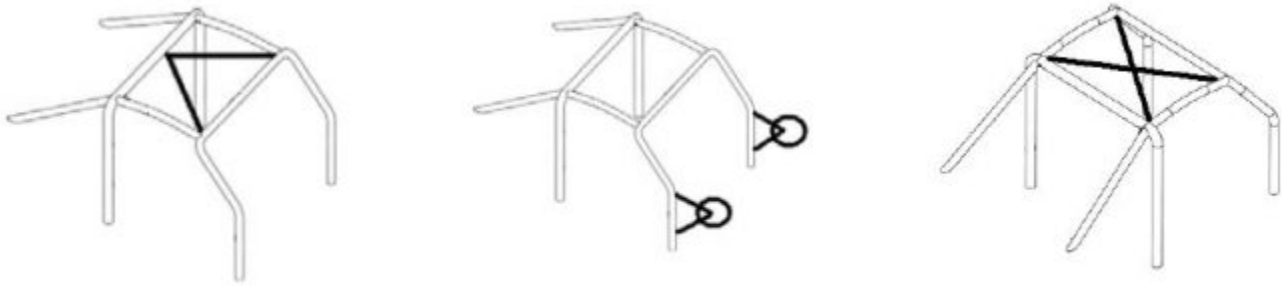
**Diagram 5.4(6)(c) – Door Aperture Requirements**

The presence of the Safety Cage in the door aperture must comply with the following criteria (Refer Diagram 5.4(6)(c) above).

- Dimension A must be a minimum of 300mm, and
- Dimension B must be a maximum of 250mm, and
- Dimension C must be a maximum of 300mm, and
- Dimension E must not be more than half the height of the door aperture Dimension H.

**(7) Optional reinforcing members:** May be used separately or in combination. They shall be either, welded in position or made removable. (Refer diagrams 5.4(7) below).

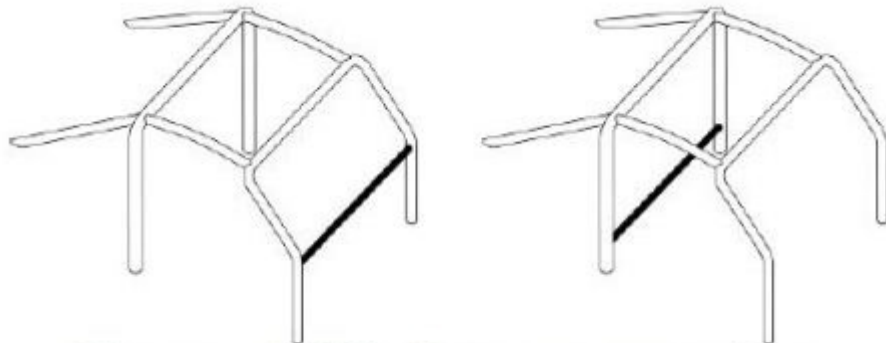




**Diagram 5.4(7) – Optional reinforcing members examples**

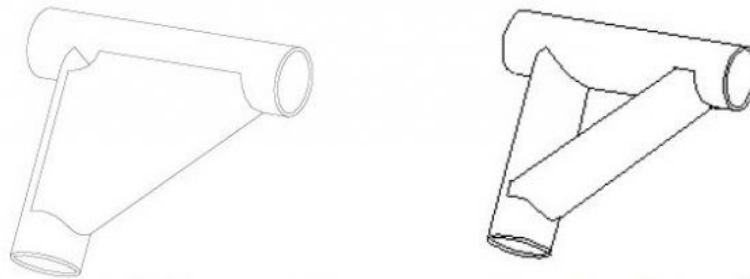
- (8) Transverse members:** The fitting of two(2) transverse members is recommended (Refer diagram 5.4(8) below). The transverse member fixed to the front rollbar must not encroach upon the space reserved for the Occupant/s. It must be positioned as high as possible, provided it is not higher than the lower edge of the windscreen. Attachment of the steering column to this member is authorised.

The transverse member fixed to the Main rollbar should be straight as possible and attach as close as possible to the Main rollbar footing or reinforcement plate.



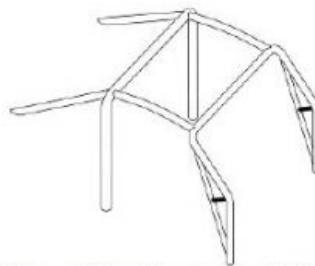
**Diagrams 5.4(8) - Transverse members**

- (9) Reinforcement of bends and junctions:** Where two(2) members form a join it is recommended to reinforce that join with tubes or gussets (refer Diagram 5.4(9)(a) below). When using gussets the materials must not be less than 1.0mm in thickness and the length of the sides attaching to the safety cage must be between 80mm and 100mm.



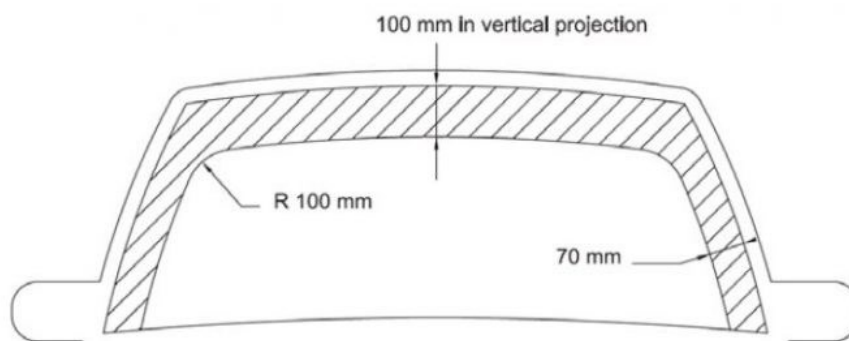
**Diagram 5.4(9)(a) – Reinforcement of Bends and Junctions.**

When using reinforcing tubes the ends of these tubes must not be more than half way down or along the members to which they are attached. A reinforcement member may be added on each side of the Lateral rollbar between the upper corner of the windscreen and the base of this rollbar (refer Diagram 5.4(9)(b) below).



**Diagram 5.4(9)(b) – Windscreen pillar reinforcement**

**Vehicles with a Safety Cage Homologated after 1 January 2006:** In frontal projection, members and reinforcements must be only visible through the area of the windscreen described by diagram 5.4(9)(c) below. Refer also Part Two Article 5.4(6)(c) for door aperture requirements.

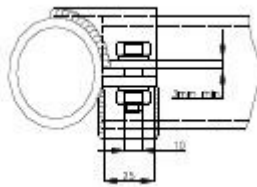


Drawing No 253-17E

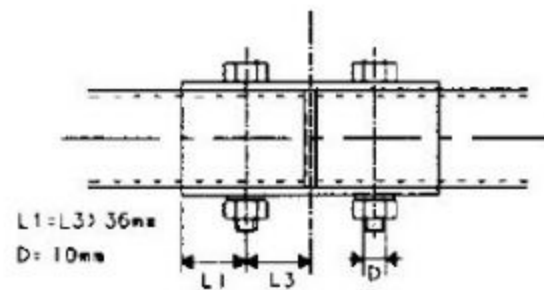
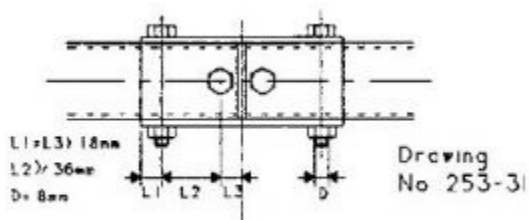
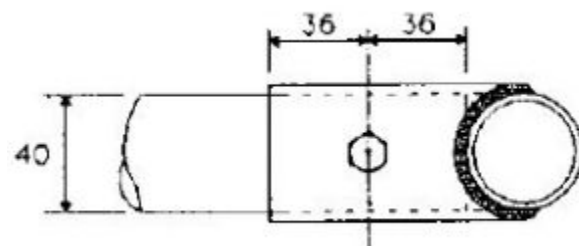
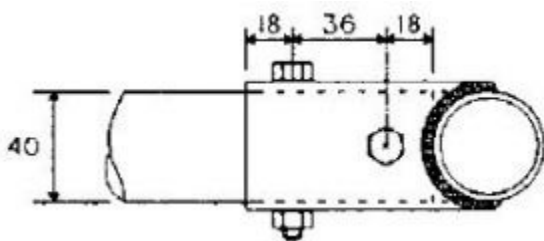
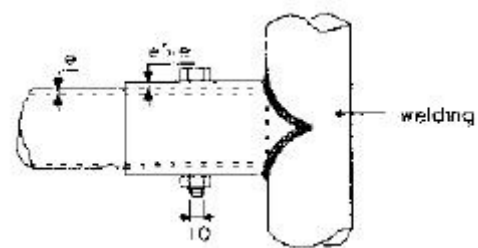
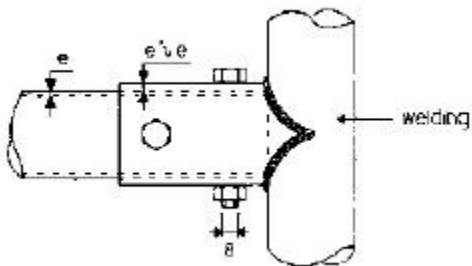
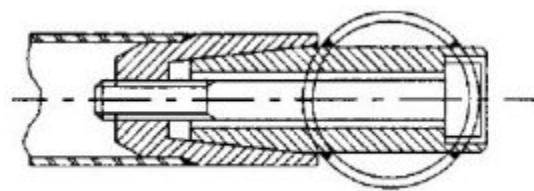
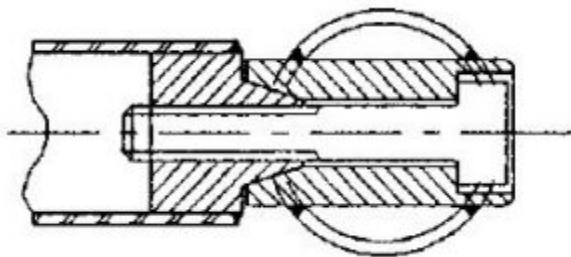
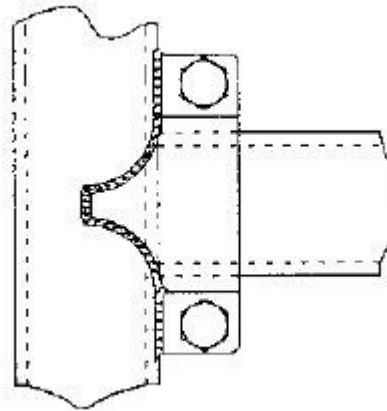
**Diagram 5.4(9)(c) – Safety Cage containment area**

- (10) **Removable members:** Should removable members be incorporated into the design, the demountable joints used shall be of an approved type (refer Diagram 5.4(10)(a)). Hinge type joints shall not be used in the upper joints of the Principal structure. (Refer Diagram 5.4(10)(b)).





Direction d'application de la charge  
Direction of applied load



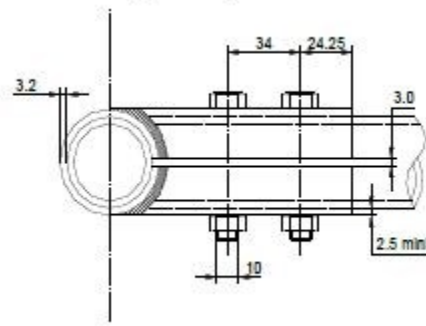
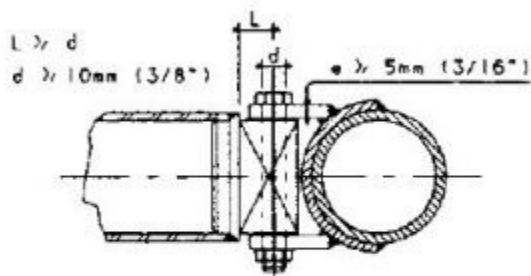
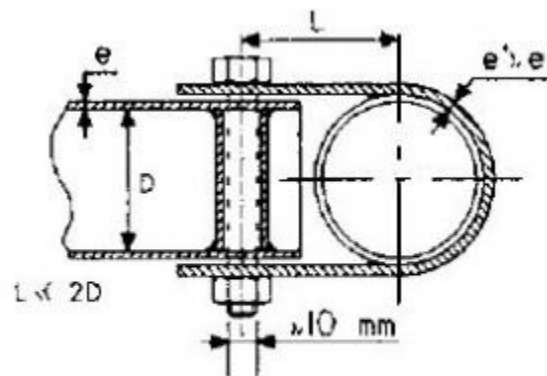


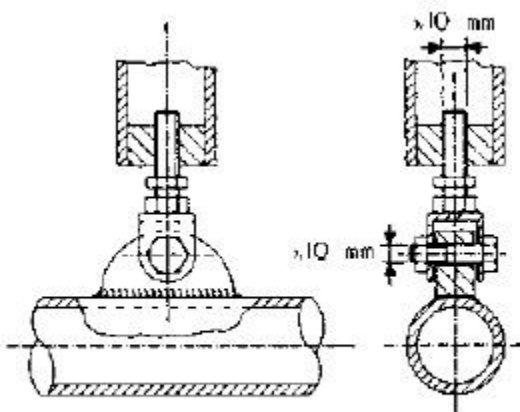
Diagram 5.4(10)(a) – Removable Member joint detail



(A)



(B)



(C)

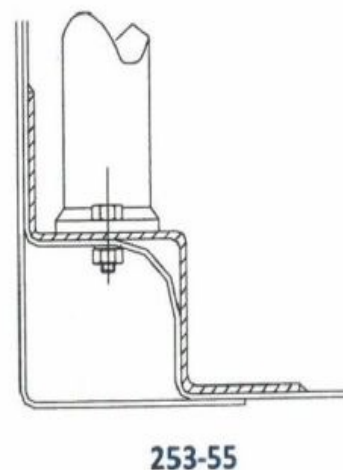
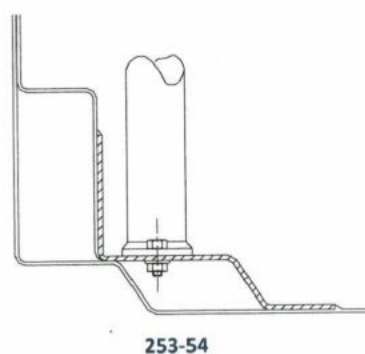
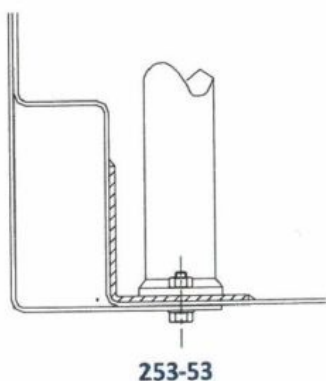
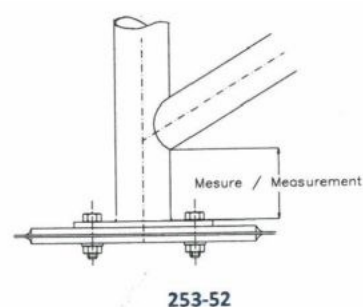
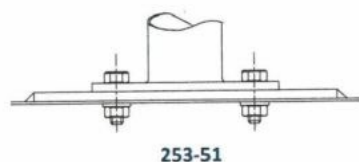
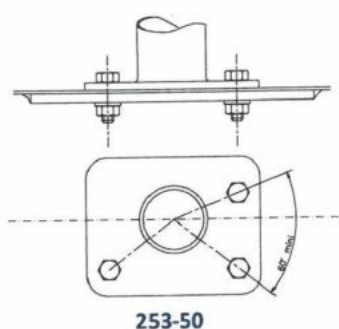
Diagram 5.4(10)(b) – Removable Member joint detail (Hinge type)

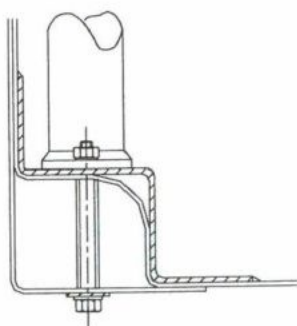


## 5.5

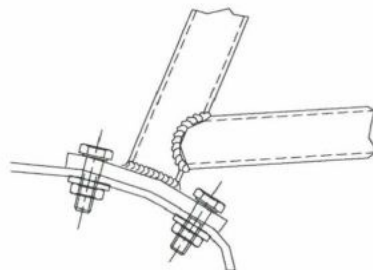
### Safety Cage Attachment:

- (1) **Reinforcement plates:** Where any member of the Safety Cage terminates at the bodyshell or chassis a reinforcement plate of at least 3mm thick steel plate shall be welded to the bodyshell or chassis.
- (a) For the Main and Lateral rollbars a reinforcement plate with a minimum area of 120cm<sup>2</sup> in full contact with the surface of the bodyshell shall be used. The reinforcement plate shall be positioned so as to transfer any loadings vertically into the bodyshell (Refer Diagram 253-50 – 253-58 below)
  - (b) For all other members a reinforcement plate with a minimum of 60cm<sup>2</sup> shall be used.
  - (c) It is recommended that reinforcement plates be attached to the bodyshell in two(2) or more planes (refer diagrams 253-50 – 253-58 below).

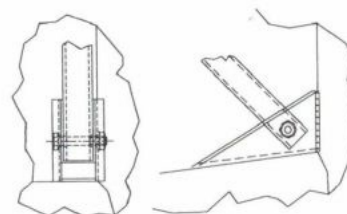




253-56



253-57



253-58

- (2) **Footing box:** From 1 January 2011 a fully enclosed Footing box constructed of welded/folded steel plate at least 3mm thick may be used to support the Safety Cage. Where a footing box is used, a Reinforcement plate, (as defined by Part Two Article 5.5(1) above), shall also be used. The Reinforcement plate may make up two(2) or more sides of the footing box but must always be clearly visible. The use of internal gusseting/webbing is recommended.
- (3) **Mounting foot:** A mounting foot may also be used but is generally only used for dismountable structures. Where used each foot must be attached by at least three(3) bolts for the main and lateral / front rollbar, and at least two(2) bolts for the backstays of minimum ISO 8.8 M8 or be welded directly to the reinforcement plate/footing box. The mounting foot shall be at least 3mm thick steel plate, and shall be smaller than the reinforcement plate/footing box to which it is affixed. (Refer Diagram 5.5(3)).

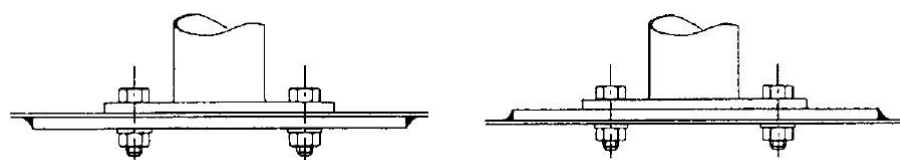


Diagram 5.5(3) – Mounting Foot Attachment

- (4) **Suspension and drive train components:**
- (a) **For vehicles with a Safety Cage homologated before 1 January 2011:** The attachment of suspension and drive train components to the Safety Cage is permitted providing those attachments are detailed on the original Safety Cage homologation. For vehicles where attachments of this type exist but are not detailed in the original homologation the homologation shall be updated by means of a Safety Cage Homologation Extension and a fatigue stress analysis and inspection report by a Road Transport Certifying Engineer shall be provided.
- (b) **For vehicles with roll protection homologated from 1 January 2011:** The attachment of suspension and drive train components directly onto the safety cage are not authorised although MotorSport NZ may allow such attachments providing a fatigue stress analysis and inspection report by a Road Transport Certifying Engineer is included with the Safety Cage Homologation Application.

**5.6 Construction Specification for Single Seater and Sports Racing Cars:** Single Seater and Sports Racing Cars with Safety Rollbars/Cages homologated after 1 January 2011 shall comply with the requirements of FIA Appendix J, or the requirements of this Schedule.

Unless otherwise specified within a dedicated technical schedule issued by an overseas ASN or the FIA, the following Safety Rollbar/Cage construction specifications shall apply. Where composite materials are used in the construction of the vehicle safety structure (chassis/safety cell or Safety Cage) refer to FIA Appendix J Article 275 and Article 259 for Single Seater and Sports Racing Cars respectively. Refer also to the MotorSport NZ Guidelines for Safety Cage Homologation for more information on the homologation requirements.

**(1) Specification for Single Seater vehicles:**

- (a) All designs shall incorporate a Main rollbar (being the principle rollbar), a Front rollbar (being the forward most rollbar) and Lateral Bracing stay/s in compliance with the following,
- (b) The Main rollbar and the Front rollbar shall be positioned symmetrically to the longitudinal centre-line of the vehicle, with the main rollbar positioned rearward of the driver, and the front rollbar positioned forward of the steering wheel (to a maximum of 250mm), and
- (c) The Main rollbar shall extend transversely across the cockpit with the outer most edge extending at least 100mm beyond the drivers' helmet when in their normal seated position, and
- (d) The minimum height of the Main rollbar shall be dictated by the calculated height necessary to ensure that the drivers' helmet remains 50mm below an imaginary line drawn between the tops of the Main and Front rollbars (refer diagram 5.1), and
- (e) Either two(2) rearward or two(2) forward facing bracing stays shall be fitted with symmetrical connection to the Main rollbar within 150mm of the top bend. Alternatively, a single rearward facing bracing stay is authorised where its top connection is positioned centrally to the top of the Main rollbar. Braces shall exceed an angle of 30° from the vertical and be straight, and
- (f) The bracing stays shall be directly welded or demountable joints (defined by diagram 5.4(10)(a) and 5.4(10)(b)) may be used, except joint 5.4(10)(b)(C) is not authorised, and
- (g) The tubes used for the Main and Front rollbars shall be made from SAE 4130 CDS tube or equivalent material and be at least 35mm in diameter and have a wall thickness of at least 2.5mm. The tubes used for the braces shall be of the same material and wall thickness, however the diameter may be reduced to not less than 26mm.

**(2) Specification for Sports Racing Cars;**

- (a) All designs shall incorporate a Safety Rollbar in compliance with the requirements of Part Two Article 5.4(1), and
- (b) The Main rollbar shall extend transversely across the full width of the cockpit with the outer most edge extending beyond the Occupant's shoulders when in their normal seated position, and
- (c) The Main rollbar shall be no further than 250mm rearwards of the normally seated Occupant(s), and
- (d) For all vehicles two(2) Lateral Bracing stays shall be fitted in accordance with Part Two Article 5.4(3). Where Backstays are used an optional single forward facing

brace that extends from a central position on the Main rollbar to the passenger floor area may also be fitted.

For Open Vehicles only, the two(2) Backstays may be replaced by two(2) forward facing Lateral Bracing stays, and

- (e) The Diagonal shall join the Main Rollbar within 100mm of the attachment point on the chassis at the lower point and within 100mm of the centre of the top bend of the main Rollbar at the upper end.
- (f) A Front rollbar is optional and may be incorporated as part of the vehicles frame forward of the steering wheel.

- (3) **Single Seater and Sports Racing Car Safety Cage Mounting:** The Main and Front rollbars should ideally be an integral part of the vehicles space-frame construction although these rollbars may be welded directly to the vehicles' space-frame/chassis, in which case framework reinforcements shall be incorporated with the attachment points located so that potential loads may be fed into the substantial structure of the vehicle's frame.

## 5.7 **Alternative Design:** Safety Cages that may differ from the minimum Material and Design specifications of this Schedule shall be classified as 'Alternative Design'.

Constructors shall submit details of their alternative design, to MotorSport NZ for consideration, prior to construction.

All the design variations must be identified; in particular the material specification and dimensions, the optional reinforcing members, and the mounting details. Construction under alternative design shall also require certification by a qualified Engineer, representing the constructor. The design must be shown to withstand the following stress minima in an engineering report with supporting calculations. This report must accompany the Safety Cage Homologation Application.

- (1) All Vehicles except Single Seater and Sports Racing Cars: Shall comply with the following: For these calculations it shall be taken that only the forward lateral, main rollbar and backstay footings are rigidly mounted.

$W$  = weight of the vehicle + 150 kg.

### (a) **Arithmetic vertical static load test on the Main Rollbar:**

0.075  $W$  kN vertical uniformly distributed load 100mm in length 250mm in width and 40mm in depth shall be applied centrally to the top of the main rollbar in a vertical direction.

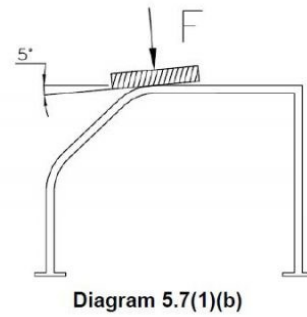
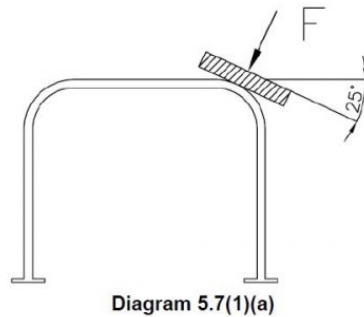
At no point shall the stress achieved in structure exceed the tensile strength of the material, and deformation shall not exceed 50mm in the direction of the applied load.

### (b) **Arithmetic static load test on the Front Rollbar:** Where the structure is asymmetrical this load shall be applied to both sides of the vehicle.

0.035  $W$  kN load shall be applied to the top of the front rollbar (at the intersection of the forward lateral and windscreen bar) directed downward, and to the front of the vehicle at an angle of 5° relative to the horizontal, and to the exterior of the vehicle at an angle of 25° relative to the horizontal in accordance with diagram 5.7(1)(a) and 5.7(1)(b).

At no point shall the stress achieved in structure exceed the tensile strength of the

material, and deformation shall not exceed 100mm in the direction of the applied load.



- (c) Arithmetic static side load test on the Main Rollbar: Where the structure is asymmetrical this load shall be applied to both sides of the vehicle.

0.035W\* kN uniformly distributed load 450mm in length shall be applied horizontally to the vertical leg of the main rollbar 550mm above the main rollbar footing.

At no point shall the stress achieved in structure exceed the tensile strength of the material, and deformation shall not exceed 50mm in the direction of the applied load.

- (2) **Single Seater and Sports Racing Cars:** Shall comply with the following: For these calculations it shall be taken that only the Forward lateral, Main rollbar and Lateral Bracing stay footings are rigidly mounted.

- (a) **Arithmetic static load test on the Main Rollbar:**

13.2 kN laterally, 49.5 kN longitudinally in a reward direction, and 66 kN vertically shall be applied to the Main rollbar simultaneously.

Additionally, but in a separate test; 13.2 kN laterally, 13.2 kN longitudinally in a forward direction, and 66 kN vertically shall be applied to the Main rollbar simultaneously.

At no point shall the stress achieved in structure exceed the tensile strength of the material, and deformation shall not exceed 50mm in the direction of the applied load.

- (b) **Arithmetic static load test on the Front Rollbar:**

75 kN vertical load shall be applied to the top of the Front rollbar.

At no point shall the stress achieved in structure exceed the tensile strength of the material, and deformation shall not exceed 50mm in the direction of the applied load.

- (3) **Safety Harness Bar:** If the minimum material dimensions as detailed in the chart under Part Two Article 5.2 are not complied with, the resistance of each anchorage point must be subject to calculation and included in the engineers report. The report must clearly demonstrate that the safety harness bar withstands a static loading of 1470daN per harness attachment point without breakage.

## 6. Homologation Application Process for Safety Rollbars and Safety Cages:

### 6.1

- (1) Make application through the MotorSport Online system, or alternatively, complete form T002, available from the MotorSport NZ website, which shall be completed by the constructor / manufacturer and submitted to the MotorSport NZ administration office together with quality photographs of the unpainted structure and the current fee.
- (2) Only correctly completed applications with accurate information with clear and close-up photographs will be able to be processed. It is imperative that the application is completed by someone suitably qualified to do so.
- (3) Advice on the completion of the application should be sought from the Technical Department wherever there is any doubt.
- (4) Once issued the Certificate shall be contained in the vehicles MotorSport NZ logbook and the homologation process will be completed with a physical inspection of the structure by an experienced Scrutineer.

## 7. First Aid Kit Contents: The following items must be contained as a minimum:

- Crêpe Bandage.
- Adhesive Tape; eg. Leucoplast or Leucopore or similar.
- Small Dressing Strips; eg. Handiplast, Bandaid, Elastoplast or similar.
- Wound Dressing Pads; Medium and Large. (For application to wounds or for bleeding)
- Pain Relief Tablets; eg. Aspirin, or Paracetamol. (not including Codcomol, Digesic or other drugs as banned by Drug Free Sport NZ)
- Adaptic [or similar paraffin gauze dressing] and/or 'Second Skin' [or similar dressing].
- Gauze Swabs or Telfa or Curity.
- Arm Sling and two(2) Safety Pins.
- A minimum of two(2) Thermal Blankets; eg. Sirius.
- Scissors and/or clothing shears.
- Saline (sodium chloride 0.9%) 5 x 30 ml or equivalent quantity for irrigation of eyes and wounds.
- Latex Surgical Gloves; two(2) pairs.

# APPENDIX TWO

## SCHEDULE A – DRIVER AND VEHICLE SAFETY

Last updated: August 2018

Page 1 of 1

Amendment Number	Date published	Date implemented	Article Number

### Part Three

#### Article 1 Electric and Hybrid Powered Vehicles

**Note:** Amendments will be visually highlighted for a duration of 12 months starting from the implementation of each amendment. Textual changes made for grammatical and/or formatting purposes will not be subject to highlighting.

### Part Three

- Electric and Hybrid Powered Vehicles:** For information pertaining to electric or hybrid powered vehicles refer to [FIA Appendix J Article 253 Article 18](#), Specific Requirements for Electrically Powered Vehicles.

# APPENDIX TWO

## SCHEDULE H – EVENT SAFETY

Last updated: 2 July 2024

Page 1 of 22

Amendment Number	Date Published	Date Implemented	Article Number
<a href="#">36091</a>	2 July 2024	2 July 2024	Part Two, Article 3, 4, 6, 7
<a href="#">36028</a>	1 March 2021	1 March 2021	Part Four, Article 4
<a href="#">36011</a>	18 July 2019	18 July 2019	Part Two, Article 6
<a href="#">36009</a>	11 July 2019	11 July 2019	Part Four, Article 1 and 2

### Part One – Objects and Reporting Requirements

Article 1 Object

Article 2 Accident and medical reporting

### Part Two – Race Events

Article 1 Safety Plan

Article 2 Control of Event

Article 3 Supervision of the Circuit

Article 4 Signalling

Article 5 Intervention

Article 6 Intervention Vehicles

Article 7 Event Practice

Article 8 Specific Requirement for Truck Race Interventions

### Part Three – Rallies and Rallysprints

Article 1 Safety Plan

Article 2 Control of Event

Article 3 Safety of the Public and Officials

Article 4 Safety of the Competing Crews



## Part Four – ClubSport Events

<b>Article 1</b>	Safety Plan
<b>Article 2</b>	Control of the Event
<b>Article 3</b>	Safety of the Public and Officials
<b>Article 4</b>	Safety of the Competing Crews

**Note:** Amendments will be **visually highlighted** for a duration of 12 months starting from the implementation of each amendment. Text changes made for grammatical and/or formatting purposes will not be subject to highlighting.

## Part One – Objects and Reporting Requirements

### 1. **Object:**

- 1.1 This Schedule shall define the aims and organisation of the supervision of the road and emergency services and establish the rules to be observed in achieving these objectives.
- 1.2 The supervision of the road is intended to maintain safe conditions for the running of the Meeting or Event and the emergency services to provide the specialised support necessary to this end.
- 1.3 Throughout this Schedule all operations are under the overall control of the Clerk of the Course or Race Director except for Events where MotorSport NZ appoints an Event Director. On such Events the Event Director will assume over riding authority and responsibility.
- 1.4 This Schedule should be read in conjunction with the MotorSport NZ Code of Practice – Fuel Handling. This code is published on the MotorSport NZ website ([www.motorsport.org.nz](http://www.motorsport.org.nz))
- 1.5 The prescriptions of this Schedule apply to all Events as below and should be read in conjunction with the appropriate Organisers Handbook. Each Handbook details the preferred methods of meeting the (Schedule H) criteria (i.e. the minimum standards deemed appropriate to achieve the criteria):
  - Part Two – Race Events;(refer also to the Race Organisers Handbook).
  - Part Three – Rally and Rallysprint Events;  
(refer also to the Rally Organisers Handbook).
  - Part Four – ClubSport Events;  
(refer also to the ClubSport Organisers Handbook).

**Note:** The Organiser Handbooks are available from the MotorSport NZ office or on the website ([www.motorsport.org.nz](http://www.motorsport.org.nz)).

### 2. **Accident and Medical Reporting:**

- 2.1 **Necessity for report:** Whenever an accident occurs, in a Meeting or Event, which causes the hospitalisation of any person or significant distortion of the vehicle's cockpit or cabin, the Organisers will be responsible for ensuring that a detailed report on the circumstances, the injuries and any damage to vehicles, is submitted to MotorSport NZ.

Should an accident occur on a road closed for competition purposes or on a permanent race venue outside of the time limits of a Meeting or Event permit the organisers and/or venue operators are obliged to keep MotorSport NZ fully informed and furnish details of the accident.

**Note:** *The Accident and Injury Reporting Procedure guidelines are published as MotorSport NZ form MA3, available from the MotorSport NZ website or from the MotorSport NZ office.*

**2.2 Accident Reporting:** The report should be made on the MotorSport Accident Report Form AM001 obtainable from the MotorSport NZ website ([www.motorsport.org.nz](http://www.motorsport.org.nz)) and as far as possible include a sketch or photographs of scene made immediately after the accident; a Scrutineers or Technical Officer's report on the condition of the vehicle; medical reports; marshals' and eye witness reports.

**2.3 Medical Reporting:** All medical reporting as required shall be completed using MotorSport NZ On Site Medical Assessment form AM002:

- (1) Mandatory Reporting:** It is mandatory for Organisers to ensure that a medical report is completed and submitted to MotorSport NZ for any injury accident to:
  - (a)** Any competitor who requires hospitalisation, or
  - (b)** Any competitor who the on-event medical staff determine is unfit to compete, or
  - (c)** Any officials, team members / crew, spectators, or any other person, injured as a result of a competition accident.
- (2) Optional Reporting:** Any competitor suffering an impact accident, other than as described above, must be assessed by the on-event medical staff at the earliest opportunity as to whether the competitor is fit to continue competing. Where a competitor is declared fit to compete, the requirement to complete the AM002 form is optional, however in any case shall be reported to the Clerk of the Course.

## Part Two – Race Events

**Note:** This part should be read in conjunction with Appendix Four [Schedule Z](#).

**1. Safety Plan:**

**1.1 For each event there will be a Safety Plan. The Clerk of the Course or an assistant will direct its implementation during the Event.**

**Note:** A Safety Plan template for Race Events may be found on the MotorSport NZ website ([www.motorsport.org.nz](http://www.motorsport.org.nz)).

**1.2 This Safety Plan shall include:**

- (1)** A map or drawing of the circuit noting all flag points, MotorSport NZ approved photographer and television camera locations and locations of all other services.
- (2)** The communications network(s) and personnel on each.
- (3)** Details of public safety and security measures, and details of authorised areas for accredited media including safety measures and shall name the chief of each of these services directly responsible to the Clerk of the Course or his assistant.
- (4)** The manning level of flag points.
- (5)** The Intervention Vehicles locations and manning.
- (6)** Details of the fuel handling, storage and safety protocols in relation to the Code of Practice – Fuel as applicable to the type of Event being conducted.
- (7)** The Medical Response Plan detailing the specific medical requirements and procedures to ensure that the appropriate medical personnel and necessary equipment can reach the scene of any incident to render optimum care to any casualty. For each level of competition the plan should include:
  - (a)** The manning and qualification requirements for personnel.
  - (b)** The Medical Intervention vehicle(s) types required and their location(s).
  - (c)** The contact details of the closest emergency service provider location(s) and the quickest method of evacuating injured to the nearest hospital.
  - (d)** (where spectators are allowed access to the Meeting or Event) provisions shall be made to have First Aid facilities available for such cases of spectators either being injured in off-track accidents or taken ill.

Event organisers are advised to liaise with either the District Commander for St John or a registered Medical Practitioner experienced in accident and emergency services for assistance in developing the Medical Response Plan and to ensure that the lines of communication and necessary medical services back up is established.

- (8)** The Fire Fighting Response Plan detailing the specific fire safety requirements and procedures to ensure that the appropriate personnel and necessary equipment to provide a complete fire extinguishing response and specialist extraction service. For each level of competition the plan should include the Fire Intervention vehicle(s) types required, their location(s), manning requirements and duties. Event organisers are recommended to liaise with the District Fire Commander for assistance in developing the Fire Fighting Response

Plan and to ensure that the lines of communication and necessary back up is established.

- 1.3 Permanent Circuits:** Each Safety Plan for a permanent circuit shall be valid for a twelve month period, commencing on 1 August of each year, and shall stipulate the minimum safety requirements in accordance with Part Two Article 1.2 above for the following levels of competition:
- (1) Clubmans permitted Events;** being those Race Events as described in Appendix Four Schedule Z Article 2.1(3)(g), and
  - (2) National permitted Events;** being those Race Events as described in Appendix Four Schedule Z Article 2.1(3) (excluding Clubmans Race as detailed in Article 1.3(1) above), and including MotorSport NZ Championships or Sanctioned Series, and
  - (3) International permitted Events;** being those Race Events issued with a MotorSport NZ International Permit, which may include MotorSport NZ Championships or Sanctioned Series.
- 2. Control of Event:** The Race (Event) Control is the centre of race supervision and direction and should provide the Clerk of the Course and assistants with the facilities necessary to perform these duties in suitable working conditions. The Clerk of the Course or his or her nominee shall remain in the Race Control for the duration of all on-track activities.
- 3. Supervision of the Circuit:**
- 3.1 Event Control:**
- (1) Control room:** A control room, be it a permanent or temporary facility, is the centre of operations for the Event and shall be equipped with the most suitable means of equipment to allow the Clerk of the Course and/or Assistant to communicate quickly with all services necessary for the safe running of the meeting or event. Ideally this room should be soundproofed to minimise external noise.
  - (2) Equipment:** The Race Control shall be provided with:
    - (a)** A telephone and/or radio communication with each flag point, safety car, intervention vehicles, rescue services and general service network.
    - (b)** A telephone connected with a national network.
    - (c)** An adequate means of voice communication with officials at track level.
    - (d)** A means of voice communication from the control room to the pit / paddock area for the purpose of communication with competitors and teams. This shall be accomplished by either a public address system and/or by radio communication on a separate channel to any used by Event Officials ("race radio").
    - (e)** The main or overriding control unit for a MotorSport NZ approved signal light system, where such system is utilised.
  - (3) Duties of Race Control:** The Clerk of the Course or nominee in charge of the Race Control is responsible for;
    - (a)** Authorising the deployment of any emergency service as shall be deemed necessary, and

- (b) The surveillance of the track by the naked eye or a closed circuit television system. Any portion of the circuit not able to be observed thus shall have Observers, able to communicate directly with Race Control, positioned, and
- (c) Ensuring that a proper log reflecting all flag and observers' reports is kept so that action may be taken where appropriate.
- (d) Further, it shall at all times be his responsibility to see that the competition is run in full compliance with the National Sporting Code its Appendices, Schedules and the Supplementary Regulations for the event.

### 3.2 **Operation:**

- (1) Closing of the Circuit: Before the start of any part of an Event, or if the circuit has been re-opened, it is the duty of the Clerk of the Course or nominee, to undertake the closing of the road, ensuring that the road is quite free from any obstacle, all observers and marshals, emergency service personnel and equipment are duly posted and all access ways onto and off the track are closed.
  - (a) The closing of the circuit can be achieved by;
    - (i) Unobstructed visual contact around the entire track, or
    - (ii) By communication with each flag and observation point, or
    - (iii) By use of a Course car.
  - (b) Where a Course car is used the following precautions must be respected:
    - (i) The Course car closing the circuit must never overtake and leave behind any other vehicle running on the circuit.
    - (ii) The officials in the Course car must report to the Clerk of the Course on completion of the reconnaissance lap.
- (2) **Reopening the Circuit:** After the end of the event or when a long break is anticipated, the Clerk of the Course or nominee shall undertake the opening of the circuit by;
  - (a) Unobstructed visual contact around the entire track, or
  - (b) By communication with each observation point.

After which service vehicles can enter to collect service personnel and equipment and remove broken-down cars and wreckage.

### 3.3 **Flag Points:**

- (1) These points provide surveillance of the circuit and its immediate surroundings and shall be manned as detailed in this Article except for Truck races or Truck practice sessions.
- For all Truck practice, qualifying sessions and races, all personnel on flag points shall vacate the points and retire to a position of safety behind second line of protection.
- The only exceptions being specific locations approved by the MotorSport NZ Circuit Safety Department and are limited to:
- (a) The flag point in closest proximity of the start finish line, and/or

- (b) Any other specific points which;
  - (i) Afford at least two(2) lines of protection, and
  - (ii) Have good line of sight for the competitors, and
  - (iii) Are in a position approved by the Circuit Safety Department.

These points shall be used to display any flag or light signals requested by the Clerk of the Course.

- (2) **Number and location:** These are determined by the MotorSport NZ Circuit Safety Department and are detailed on the Venue Licence.
- (3) **Protection:** The points must be situated so that only in the case of an incident should their staff be compelled to operate unprotected.
- (4) **Equipment:** Each point shall be provided with:
  - (a) A communication system that enables clear and unobstructed communication with Race Control.
  - (b) A set of signalling flags for use under the supervision of the senior flag marshal attached to the point; each set to include two(2) yellow flags. Any supplementary or relay points must also be equipped with appropriate set of flags.
  - (c) One(1) portable fire extinguisher of at least 4Kg capacity in cases where the point personnel are required to act as first intervention.
  - (d) One(1) or more stiff brooms.
  - (e) A quantity of oil absorbing material.

**Notes:**

- 1. *If a signal light system is used, the flags referred to in (b) are to be used only in case of failure of the light system.*
- 2. *The equipment in (d) and (e) can alternatively be available from a suitable Track Maintenance vehicle.*
- 3. *For the specific points referred to as supplementary or relay points in (4)(b) of this Article the minimum equipment required is a communication system with the Clerk of the Course and yellow and red flags or lights.*

**(5) Flag Point Staff:**

- (a) Each flag point during official practice/qualifying sessions and racing shall be placed under the responsibility of a Post Chief with at least one(1) more person who has received training in the duties of a flag marshal.
- (b) Where a MotorSport NZ approved signal light system is used manning may be reduced to one(1) flag marshal per flag point, except that in the event of signal light failure, all on-track activities must immediately be halted until either the signal light system becomes operational, or the flag point manning levels are increased to the levels described in (5)(a) above.

- (c) For other practice sessions it is permitted to reduce the minimum staffing level to one(1) on the proviso that any session will be immediately stopped in the event of any accidents in the sector of responsibility of the point.
  - (d) For Clubmans permitted Events or Events issued with a MotorSport NZ permit and for that Meeting or Event other practice sessions it is mandatory only to man the flag points marked “compulsory manning” on the Venue Licence. Ideally those marked Clubmans optional should also be manned if available trained staffing permits.
  - (e) Marshals should not wear clothing similar in colour to any signalling flag, particularly red or yellow.
- (6) **Duties:** The Post Chief must maintain communications with Race Control and each point shall:
- (a) Warn drivers by means of signalling of any danger or difficulty, which they are unable to foresee, and
  - (b) Report immediately to Race Control any incidents, which occur within the zone limits or sector of responsibility of the point, and
  - (c) Report to Race Control any unsporting or dangerous behaviour, particularly with regard to code of conduct (refer Appendix Four Schedule Z), and
  - (d) Maintain its sector of the circuit clean and clear of obstacles, attempting to remove any spilled oil, unless expressly requested not to, with the aid of an absorbent substance, brooms and spades.
  - (e) Report to Race Control any incidents concerning spectator safety or security.
  - (f) Not leave the point before the circuit has been declared open at the end of an event.
- (7) **Interventions:** It is normally the duty of the crash/rescue marshals to make the first intervention in case of an incident, any variance from this procedure will be detailed in the Event Safety Plan.
- (8) **Driving Standards Observers:** These Observers shall be positioned behind an approved first line of protection.

#### 4. Signalling:

4.1 In the supervision of the circuit, the Clerk of the Course (or the assistant) rely largely on the use of signals to contribute to the driver’s safety and enforce the regulations.

- (1) **Daytime:** Signals are given in daytime either by:
- (a) different coloured flags, or alternatively
  - (b) A MotorSport NZ approved signal light system. Where a signal light system is used, each flag point must be equipped with the full set of flags in case of equipment failure. Additionally, all competitors must be briefed on the usage of the lights and the process to be followed in case of signal light failure.
- Note: The flags and boards that are only displayed at the start/finish line shall still be used.*
- (2) **Night time:** Signals are given at night by a MotorSport NZ approved signal light system, or alternatively, by a minimum of a red light and a yellow light at each point. All competitors

must be briefed on the usage of the lights and the process to be followed in case of signal light failure.

## 4.2 Flags and signal light system:

- (1) **Use of Flags or signal light system:** Flags or an approved signal light system will be used during both practice and racing. The reasons for use and meanings attributed to these signals are detailed in Appendix Four Schedule Z.
- (2) **Flag signals used exclusively by the Clerk of the Course or their nominee:** These flags, with the exception of the starting or finishing flag may be authorised to be displayed at places other than the Start Line should visibility, length of the circuit or the speed of the cars make this advisable.
  - (a) **Starting Flag:**  
Usually the New Zealand flag.  
**Note 1:** *Should this not be the case, the colour of the flag, which must not cause confusion with any already existing flag, must be specified in the Supplementary Regulations.*
  - (b) **Finishing flag:**  
A black and white chequered flag.
  - (c) **Red flag:**
  - (d) **Black and white flag:**  
Flag divided into black and white halves split diagonally.  
**Note 2:** *Shown together with a white number on a black signalling board that includes the words Time Penalty, or*  
**Note 3:** *Shown together with a white number on a black signalling board.*
  - (e) **Black flag:**  
**Note 4:** *Shown together with either a white number on a black signalling board, or*  
**Note 5:** *Shown together with a white number on a black signalling board that includes the words Drive Through Penalty.*
  - (f) **Black flag with orange disc (40 cm in diameter):**  
**Note 6:** *Shown together with a white number on a black signalling board.*
- (3) **Flags used at the Flag points:** Flags used by the marshals shall be shown stationary (least danger) or waved (danger extreme, caution required). Depending on the severity of the incident, the Yellow and/or Yellow with Red Stripes flags may be displayed double waved.
- (4) **Light signals at the flag points:** A MotorSport NZ approved signal light system may replace the following flags, and shall convey the following meanings:
  - (a) One(1) yellow light illuminated – same meaning as one(1) waved yellow flag.
  - (b) Yellow light(s) divided into two equal segments, each alternately flashing – same meaning as two(2) waved yellow flags.
  - (c) The letters 'S C' illuminated – same meaning as the Safety Car Board as described in Appendix Four, Schedule Z.
  - (d) Green light illuminated – same meaning as green flag.



- (e) Blue light illuminated – same meaning as blue flag.
- (f) Yellow light with red strips flashing – same meaning as yellow with red stripes flag.
- (g) Red light – same meaning as red flag and may only be used under the direction and control of the Clerk of the Course.
- (h) White light – same meaning as a white flag.

**(5) Flag or light signals at pit exit:** Lights are the preferred option.

**(a)** During Practice / Qualifying two(2) signals are required:

- (i) A red flag or red light(s), visible to pit lane only, denoting that the pit exit is closed.
- (ii) A green flag or green light(s) used to show that the pit exit is open. This signal informs the driver that on exiting the pits there is no immediate traffic at the blend line onto the circuit proper.

**(b)** During Racing three(3) signals are required:

- (i) A red flag or red light(s), visible to pit lane only, denoting that the pit exit is closed.
- (ii) A green flag or green light(s) used to show that the pit exit is open. This signal informs the driver that on exiting the pits there is no immediate traffic at the blend line onto the circuit proper.

**Note:** For races only, the green light is only illuminated prior to the start procedure to allow cars to exit the pit on their preliminary lap, after that the light is turned off.

- (iii) A blue flag or blue light(s) flashing, visible to pit lane only, is shown to any driver exiting the pits during a race to exercise caution as there is likely to be a vehicle already on the circuit proper close to or in the blend line area.

**5. Intervention:**

**5.1 Definition:** Fast intervention vehicles are an essential part of circuit emergency equipment and provide the specialist intervention that may be required at any accident on the circuit or in the pits and paddock area. Intervention vehicles are defined as:

- (1) Course Car
- (2) Safety Car
- (3) Fire Fighting Intervention Vehicles
- (4) Medical Intervention Vehicles
- (5) Rescue Intervention Vehicles
- (6) Extrication Intervention Vehicles
- (7) Other Vehicles

**5.2 Duties:** There are three main areas of responsibility of intervention these being rescue, firefighting and medical.

**6. Intervention Vehicles:**  
**6.1 Course Car:**

**(1) Type / Equipment:** The Course Car shall be a vehicle of either two(2) or four(4) wheel drive with seating for a crew of up to four(4) persons. It should be parked in pit lane to facilitate access by the Clerk of the Course and should have:

- (a)** Flashing yellow / amber light(s) the roof, and
- (b)** Two-way radio communication with Race Control.

**Note:** *The vehicle's emergency (hazard) flashers may be used in lieu of flashing roof lights.*

**(2) Manning:** The Course Car shall be manned by the Clerk of the Course or their nominee as required.

**(3) Duties:** For use by the Clerk of the Course or their nominee for course clearance and attending incidents as required.

**6.2 Safety Car:**

**(1) Type / Equipment:** The Safety Car shall be a vehicle of either two(2) or four(4) wheel drive with seating for a crew of up to four(4) persons and shall have:

- (a)** The words "Safety Car" in letters of similar dimensions to those of the race numbers, on the rear and sides, and
- (b)** Flashing yellow / amber lights on the roof, and
- (c)** A green light installed in a position easily seen by the driver of a competing car following. This light being controlled by the observer and used in re-establishing the correct race order behind the Safety Car, and
- (d)** Two-way radio communication with Race Control.

**(2) Manning:** The Safety Car crew shall be attired in fire resistant clothing including gloves and shall:

- (a)** Be driven by an experienced circuit driver who shall hold either a current C2 Grade competition licence, or has previously held an equivalent grade competition licence.
- (b)** An observer is required and shall be a person capable of recognising the competing cars and who is in permanent radio contact with Race Control. The observer shall convey instructions to following competitors by means of the green light.

**(3) Duties:** The Safety Car will:

- (a)** Be brought into operation to neutralise a race upon the sole decision of the Clerk of the Course, or
- (b)** Act in an intervention role if and when requested by the Clerk of the Course.

**6.3 Fire-Fighting Intervention Vehicle(s):** This service is intended to combat fires resulting from incidents on the track, pits or paddock. It will act as a back up to the roles of the Rescue Intervention and Extraction Intervention services.

(1) **Type / Equipment:** Shall be a vehicle of either two(2) or four(4) wheel drive with seating for a crew of up to four(4) persons. It should be parked in pit lane to facilitate access by the Clerk of the Course and should have:

(a) Flashing yellow / amber light(s) the roof, and

(b) **Extinguishants:** Appendix Two Schedule A details the type of extinguishants considered suitable for dealing with vehicle fires. Event organisers are recommended to liaise with the District Fire Commander on extinguishants suitable for all other fire risk.

(2) **Duties:** To act as second intervention and must fulfil two basic requirements:

(a) To reach the fire and isolate the driver from it within the shortest time, and

(b) To have adequate and appropriate means to completely extinguish the fire, or suppress the fire until further fire service units attend.

**6.4 Medical Intervention Vehicle(s):** The circuit medical service is organised in order to come to the aid of drivers or any other persons injured in accidents occurring on the circuit during a Meeting or Event and including all official practice/qualifying.

(1) **Type / Equipment:** Shall be an ambulance or equivalent, as determined by the District Ambulance Commander, equipped to provide appropriate medical care and has the ability to transport patients under emergency conditions on public roads.

(2) **Manning:** For all Race Meetings or Events irrespective of event permit status the person responsible for Medical services shall act at all times under the authority of, and have adequate means of communication with, the Clerk of the Course.

(3) **Manning Qualifications:** The Medical Services shall be at least under the direction of a NZ Ambulance Board Paramedic who:

(a) Is fully conversant with the Event Safety Plan and these regulations, and

(b) Has at least one(1) operational resuscitation unit in an intervention vehicle or inside a permanent or temporary structure.

(4) **Duties:**

(a) Supply the initial level of medical support required at the scene.

(b) To be able to resuscitate and stabilise the condition of the injured driver or advise the Clerk of the Course on the services required at the scene of the emergency.

**6.5 Rescue Intervention Vehicle(s) (First Intervention):**

(1) **Type / Equipment:** There are two types of Rescue Intervention Vehicle:

(a) **Quad Bike:** These are a four-wheel motorcycle of either two(2) or four(4) wheel drive. The bike shall be equipped with;

(i) A minimum of one(1) flashing beacon, visible from at least 200metres in daylight conditions and visible through a horizontal plane of 360 degrees. These beacons shall be amber in colour. Additionally, extra amber beacons may be fitted as desired. These beacon(s) shall be used whenever the vehicle is moving to an incident and travelling on or near the racing surface, and shall be turned off at all other times.

(ii) Suitable mountings enabling quick release for at least one(1) extinguisher of;

- ABC Extinguishant of 2.0kg capacity, or
- AFFF Extinguishant of 2.4 litres capacity.

(iii) A towrope with a quick method of attachment enabling its use for towing disabled vehicles to a position of safety.

(iv) A method of communication with the Clerk of the Course. The preferred system being a hands free two-way system enabling the rider to communicate directly while either on the bike or at the scene of any incident.

**Notes:**

1. *A Quad bike is an ideal vehicle for first intervention purposes.*
2. *When using a quad bike for the purpose of towing, the operator must ensure that it is being operated within the manufacturer's specifications for towing.*

(b) **Vehicle:** A vehicle of either two(2) or four(4) wheel drive with seating for a crew of up to four(4) persons is required to cover such duties as first or second intervention.

(i) These vehicles shall be equipped with a minimum of one(1) flashing beacon, visible from at least 200metres in daylight conditions and visible through a horizontal plane of 360 degrees. These beacons shall be amber in colour. Additionally, extra amber beacons may be fitted as desired. These beacon(s) shall be used whenever the vehicle is moving to an incident and travelling on or near the racing surface, and shall be turned off at all other times.

(ii) The vehicle must be in direct two-way communication with Race Control at all times enabling the Clerk of the Course to be kept fully informed.

**(2) Manning:**

(a) **Quad Bike:** The rider should be a person with a sound knowledge of this Schedule and one who can confidently keep the Clerk of the Course apprised of the requirements at any incident scene. All Quad riders must wear an ATV helmet appropriate for quad bike operation.

(b) **Vehicle:** The driver shall be attired in fire resistant clothing including gloves and a balaclava and the vehicle shall be in direct two-way communication with Race Control at all times enabling the Clerk of the Course to be kept fully informed.

All additional crew must be equipped for the task they are to perform, such as;

- A fire marshal will be equipped in full fire resistant clothing, and
- A Doctor, Paramedic or trained first aid person preferably in coloured overalls or clearly marked clothing so that they are easily identifiable.

**(3) Duties:**

(a) To have the means and equipment for the release of any persons trapped as the result of an accident on the track, or provide immediate information to the Clerk of the Course on the equipment required to effect the extraction of the driver. It can be integrated with the role of an Extrication Intervention Vehicle or carried out in tandem.

(b) To suppress or extinguish a fire.

(c) To enable any damaged vehicle to be towed to a position of safety by way of a rope.

- (d) An intervention vehicle, manned by Intervention, medical and firefighting personnel, shall follow the field for the first lap of any race. Should the speed of the vehicles or the length of the circuit make it impractical for them to cover an entire lap, they should follow the field as far as practical and then take up their allotted positions.

#### 6.6 **Extrication Intervention Vehicle(s) (Second Intervention):**

- (1) **Type / Equipment:** As detailed for Rescue Intervention Vehicles above.
- (2) **Manning:** As detailed for Rescue Intervention Vehicles above.
- (3) **Duties:**
  - (a) To be able to remove an injured driver from his car in a condition of safety, and
  - (b) To suppress or extinguish a fire.
  - (c) To enable any damaged vehicle to be towed to a position of safety by way of a rope.

#### 6.7 **Other Vehicles:** Includes such vehicles as recovery trucks, cranes and track barrier repair vehicles:

- (1) **Type / Equipment:** Vehicles should ideally be utility or flat deck light trucks or HIAB-type trucks of either two or four wheel drive capable of crossing all terrain either inside or outside the perimeter of the circuit. These vehicles shall be equipped with a minimum of one(1) flashing beacon, visible from at least 200metres in daylight conditions and visible through a horizontal plane of 360 degrees. These beacons shall be amber in colour. Additionally, extra amber beacons may be fitted as desired. These beacon(s) shall be used whenever the vehicle is moving to an incident and travelling on or near the racing surface, and shall be turned off at all other times.
- (2) **Manning:** The crew should be attired in coloured overalls or clearly marked clothing suitable for the tasks required and such that identifies their role.
- (3) **Duties:**
  - (a) The removal of damaged vehicles from the circuit, or
  - (b) The repair of damage to the circuit sustained during competition.
  - (c) Any other duties as directed by the Clerk of the Course.

#### 7. **Event Practice:**

7.1 Where a practice day is held immediately prior to, or as part of, a Meeting or Event, the minimum safety levels shall be:

- (1) **Race Control:** Shall be manned by the Clerk of the Course and/or his assistant(s), in sufficient numbers to adequately control the activities on the circuit.
- (2) **Flag Points:** Each Flag Point required to be manned in accordance with Part Two Article 3.3 above, should be manned by at least one(1) marshal, in communication with Race Control, who should be equipped with a minimum of:
  - (a) One(1) Red flag

- (b) One(1) Yellow flag
- (c) One(1) Yellow/red striped flag
- (d) One(1) portable fire extinguisher of at least 4Kg capacity.

**(3) Intervention Vehicles:** There should be sufficient intervention vehicles commensurate with the total number of practice vehicles, but in any case shall not be below the minimum of:

- (a) One(1) Course Car
- (b) One(1) Fire Fighting Intervention Vehicle
- (c) One(1) Medical Intervention Vehicle
- (d) One(1) Rescue Intervention Vehicle
- (e) Other Vehicles as required.

For these practice days it is permissible to have one(1) vehicle covering more than one of the above requirements.

**7.2** Additionally, the Chief Medical Officer of the Event or their delegated assistant shall be in attendance.

**7.3** The emergency services (local hospital, ambulance, fire) are to be advised.

**8. Specific Requirement for Truck Race Interventions:** Throughout the duration of all truck racing or practice Intervention crews and vehicles shall be confined to positions that afford both first and second line of protection or are stationed in the pit lane.

No intervention crew will be deployed without the authority of the Clerk of the Course and not before the practice or race has been stopped.

## Part Three – Rallies and Rallysprints

**Note:** *This part should be read in conjunction with Appendix Three Schedule R and Schedule RS.*

**Preamble:** This Part deals specifically with Rallies and Rallysprints (which are by their very nature a single stage Rally) from an event organiser's perspective.

### 1. **Safety Plan:**

**1.1** For each event there will be a Safety Plan. The Clerk of the Course or an assistant will direct its implementation during the Event.

**Note:** *A Safety Plan template for Rally Events may be found on the MotorSport NZ website ([www.motorsport.org.nz](http://www.motorsport.org.nz)).*

**1.2** This safety plan shall include:

- (1)** The location of the Rally Headquarters (Rally Control).
- (2)** Officials Contact Schedule (the names of the various people in charge);
  - (a)** Clerk of the Course.
  - (b)** Chief Medical officer.
  - (c)** Chief Safety officer.
  - (d)** Safety officers/managers for each special stage.
- (3)** The addresses and telephone numbers of the various safety services;
  - (a)** Police.
  - (b)** Hospitals.
  - (c)** Emergency medical services.
  - (d)** Firefighting services.
  - (e)** Breakdown services
  - (f)** Red Cross, St John Ambulance (or equivalent).
- (4)** The full itinerary with detailed road sections.
- (5)** The safety plan for each special stage, which must list safety officers/managers, emergency services, GPS coordinates for the start, the finish and intermediary points, for that stage, telephone numbers, etc, plus a detailed map of the special stage.
- (6)** The safety plan must specifically address issues in each of the following areas:
  - (a)** Safety of the public.
  - (b)** Safety of the competing crews.
  - (c)** Safety of the officials of the event.
  - (d)** Fuel safety protocols as described in the Code of Practice – Fuel.

- (7) With the exception of Rallysprints, a draft of the safety plan must reach the Permit Issuing Authority at least four(4) weeks prior to the start.

For Rallysprints a draft of the safety plan must reach the Permit Issuing Authority at least three(3) weeks prior to the start.

Any comments on the structure of the plan will be advised by the Permit Issuing Authority as soon as practicable.

2. **Control of Event:** The Rally Headquarters is the centre of the event supervision and direction and should provide the Clerk of the Course and assistants with the facilities necessary to perform these duties in suitable working conditions. The Clerk of the Course or nominee shall remain in the Headquarters for the duration of all competition activities.

**Note:** For Rallysprints the control of the event may be in a caravan, tent or large vehicle on site.

3. **Safety of the Public and Officials:**

- 3.1 **General Public Safety:** A major priority of the safety plan is to ensure the safety of the general public including spectators, residents and other occupiers affected by the road closures.

- 3.2 **Refuelling and Servicing:** Where the public is permitted access to areas where refuelling or servicing will take place, consideration to their safety should be outlined in the safety plan.

3.3 **Stage Security Vehicles:**

- (1) This group consists of: SAFETY CAR; WARNING CAR(S) (00 and 0); SWEEPER(S).
- (2) The stage security vehicles must have an event door banner on the two(2) front doors. This shall carry "SAFETY" or "00" or "0" or "SWEEPER" as appropriate.
- (3) The warning and sweeper cars must be equipped with warning roof lights and audible warning system. It is recommended that the safety car carry similar equipment.
- (4) The crews of the safety and warning cars must have considerable rally experience and must be able to give the Clerk of the Course full information and comments concerning the conditions along the route.

- 3.4 **Safety on Road Sections:** The itinerary and time schedule must take traffic conditions and the crossing of built-up areas into consideration.

- 3.5 **Safety of Officials:** Organisers must ensure that in performing their duties officials are not required to place themselves in danger.

4. **Safety of the Competing Crews:**

4.1 **Safety Services:**

- (1) At the start of each special stage (as a minimum):
  - One(1) medical first intervention vehicle (FIV);
  - First Aid personnel as specified in the current Motorsport Manual;
  - Suitable communications equipment to maintain contact with HQ.
- (2) At the intermediary points on the route for long stages (greater than 30km):
  - One(1) medical first intervention vehicle;
  - First Aid personnel as specified in the current Motorsport Manual;
  - Suitable communications equipment to maintain contact with HQ.



(3) At the finish of each special stage (as a minimum):

- One(1) fire extinguisher of a minimum capacity of 4kg;
- Suitable communications equipment to maintain contact with HQ.

**Note:** For Rallysprints at least one(1) intermediary point shall be established for communication purposes only, refer Part Three Article 4.3.

#### **4.2 Preventative Measures (Signalling and road markings):**

(1) Roads and access roads leading to stages must be closed to traffic. This must be done in the following manner:

- (a) Major or through roads, or any road along which traffic could be expected, must be blocked and manned by a marshal, and
- (b) Short no-exit roads (e.g. to farms, etc) must be blocked or taped in accordance with the event taping policy.

(2) It shall be the responsibility of the Safety Car to check that the appropriate closure method is in place and to immediately advise the Rally HQ (rally control) of any omissions which must be rectified prior to the commencement of the special stage.

#### **4.3 Supervision:**

- (1) For events not utilising a Rallysafe or similar approved Safety Tracking System only, a communication network (set up approximately every 15km) unique to each special stage, and in direct contact with Rally HQ, must be established to allow the vehicles to be tracked and the running of the rally to be supervised.
- (2) The tracking of vehicles, on the special stage, must be carried out either at Rally Headquarters (rally control) or by the special stage safety officer. Some form of tracking chart (electronic or otherwise) should be used either on the special stage by the special stage safety officer or at rally headquarters. Each organiser must draw up, and show in the safety plan, this procedure for tracking vehicles and must also list the procedure to be followed in the event of a missing competitor.
- (3) Each communication point shall be identified in the road book and by a sign at least 550mm in diameter, bearing the communication point symbol. The sign symbol must be in black on a blue background.
- (4) In addition there should be a yellow warning sign 100m prior to the communication point.
- (5) Any FIV within a stage must be in direct communication with Rally HQ. An additional sign (red cross) should be located beneath the communication point sign at this point.
- (6) For Rallysprints, at least one(1) communication point mid stage shall be established and able to communicate directly with event control as well as the start and finish points.

#### **4.4 Evacuation:**

- (1) Evacuation routes should be planned for each special stage. They must be clearly shown in the safety plan (by a map or diagram).

## Part Four – ClubSport Events

**Note:** *This part should be read in conjunction with Appendix Five, Schedule C and Schedule DR.*

**Preamble:** The regulations contained in this Part apply to all ClubSport Events as defined in Appendix Five with the exceptions of;

- (1) Motorkhanas, and
- (2) Sporting Trials, and
- (3) Car Trials, and
- (4) Regularity Trials.

For Motorkhanas given the nature of such events a safety plan is not a prerequisite however organisers are advised to consider the basic safety measures detailed in Article 1.2(1), (2) and (3) of this Part when planning events.

For Sporting Trials the event safety requirements will be specified in Appendix Five Schedule CK available as a separate booklet from MotorSport NZ.

For Car Trials the event safety requirements will be specified in Appendix Five Schedule T available as a separate booklet from MotorSport NZ.

For Regularity Trials the safety planning requirements as detailed in Part Two of this Schedule should be applied as if it was a Clubmans Race event.

### 1. **Safety Plan:**

- 1.1 For each event there will be a Safety Plan. The Clerk of the Course or an assistant will direct its implementation during the event.

**Note:** *A Safety Plan template for ClubSport Events may be found on the MotorSport NZ website ([www.motorsport.org.nz](http://www.motorsport.org.nz)).*

- 1.2 The plan may differ in its complexity between the levels required for the varying types of ClubSport events but in all cases shall describe the steps the organisers will take to:

- (1) Protect the public and spectators;
- (2) Protect the officials;
- (3) Protect the competitor;
- (4) Provide fire, medical and rescue services in the event of an accident;
- (5) Recover vehicles involved in accidents;
- (6) Provide a set of conditions for continuation of the event after an accident.

- 1.3 The Safety Plan shall include a diagram of the venue, (preferably drawn to scale), showing the position of any protective barriers, spectator areas, marshal points, medical/first aid units, ambulance, rescue and recovery units, fire extinguishers/appliances as applicable. All roads and other identifying features should be named. It is required to include a GPS reference, which greatly assists all emergency services in any needed deployment.

**Note:** *In a number of instances organisers after taking into account the layout of the venue may decide to restrict spectator access to a very limited number of areas and designate all the remaining area prohibited access or “no go” areas. In such cases the venue diagram should clearly note these features.*

**1.4** The Safety Plan shall include;

- (1)** The location of the event control post.
- (2)** The names of the various people in charge,
  - Clerk of the Course including any assistants or deputies,
  - Safety Officer
- (3)** The contact details for safety services,
  - Police,
  - Fire service,
  - Hospitals,
  - Emergency medical services and
  - Breakdown services.
- (4)** Reference to the Code of Practice – Fuel.

The safety plan shall specifically address issues of spectator, competing crews and officials' safety.

The safety plan shall allow for adequate numbers of marshals to control the event and members of the public. The level of training of these marshals must also be set down.

**1.5** A draft of the plan must be submitted to the Permit Issuing Steward along with the event permit application.

**Notes:**

- 1.** *The Permit Issuing Steward will check the submitted draft for compliance with the regulations.*
- 2.** *The Organising permit will remain provisional until such time as the event safety plan receives approval.*

**2. Control of the Event:**

**2.1 Event Control Post:** This control post (e.g. caravan, van, tent etc) is the centre of the event supervision and direction and should provide the Clerk of the Course and assistant(s) with the facilities necessary to perform these duties. The Clerk of the Course or assistant(s) shall remain at the control post for the duration of the competition activities.

**2.2 Communication:** The Clerk of the Course must have a means of immediate contact with the start, finish and all intermediate marshal points along with other key officials including Intervention and/or First Aid vehicle/s (e.g. radio).

**2.3 Medical service:** The attendance of a qualified first aid official with a complete first aid kit is compulsory. Included with the first aid kit will be some form of mobile shelter capable of protecting a patient from the elements. Refer to Schedule A Part 2, Article 7 for minimum contents of the first aid kit

**3. Safety of the Public and Officials:**

**3.1 General Public Safety:** A major priority of the safety plan is to ensure the safety of the general public including spectators, residents and other occupiers affected by the road closures.

Organisers must ensure that adequate information is available for spectators showing clearly how they can get to good safe viewing points. These viewing points need to be constructed and manned in accordance with the layout depicted in the event Safety Plan.

- 3.2 Refuelling and Servicing:** Where the public is permitted access to areas where refuelling or servicing will take place, consideration to their safety should be outlined in the safety plan.

**3.3 Event Security Vehicles:**

- (1) This group consists of: a Clearance Car and Intervention Vehicle(s).

**Note:** *It is possible use one(1) vehicle for both roles.*

- (2) In cases where it is not possible to view clearly the entire course from the event control post or start line, the Clearance Car shall ensure that the course is clear and that spectators are in areas of safety prior to each round of the competition.

The crew of the Clearance Car should have event organisation and competition experience and must be able to give the Clerk of the Course full information and comments concerning the conditions along the course.

- (3) The Intervention Vehicle(s) shall enable a qualified first aid official along with a person capable of operating a fire extinguisher to be transported safely to the scene of any incident immediately on request from the Clerk of the Course.
- (4) Ideally the Clearance Car and Intervention Vehicle(s) should be equipped with warning roof lights and audible warning system. The vehicle's hazard flashers should be used if roof lights are not fitted.

**4. Safety of the Competing Crews:**  
**4.1 Safety Services:**

- (1) **Vehicles:** At the start area of the event (as a minimum):

- One(1) first intervention vehicle (FIV);
- Clearance car.

**Note:** *It is possible use one(1) vehicle for both roles.*

- (2) **Intermediary points on the course:** Except for those events where all parts of the course are clearly visible from the event control post, intermediate marshal posts shall be established along the course in accordance with the course characteristics, bearing in mind light and weather conditions and ensuring that;

- (a) No section of the road may escape observation by sight or sound, with the exception of small sections of the course (not exceeding 100m) obscured by a road undulation, buildings, natural landscape or undergrowth, and
- (b) Each point has effective and immediate voice communication communications with event control, start and finish line and all other intermediary points.

- (3) **Intermediary points function and equipment:** The function is to monitor the progress of cars and report any stoppages or hazards, which occur.

They shall be equipped with;

- (a) Red flags to wave at competing vehicles to warn when the road ahead has become unsafe or impassable.

**Note:** *For those events conducted entirely on a MotorSport NZ licenced circuit, the use of the red lights from an approved signal light system may replace the red flags. Red flags must be immediately available at all points.*

- (b) Fire extinguisher with a minimum capacity of 0.9kg.
- (c) Effective and immediate voice communication equipment.

#### **4.2 Access roads onto the course:**

- (1) Roads and access roads leading onto the course must be closed to traffic. This must be done in the following manner:
  - (a) Major or through roads, or any road along which traffic could be expected, must be blocked and manned by a marshal, and
  - (b) Short no-exit roads (e.g. to farms, etc) and/or farm access gates must be blocked or taped.
- (2) It shall be the responsibility of the Clearance Car to check that the appropriate closure method is in place and to immediately advise the Event Control Post of any omissions which must be rectified prior to the commencement or continuation of the competition.

#### **4.3 Fire Fighting Service:** This Service is intended to provide only the basic requirements of a fire resulting from an incident on the course or in the pit paddock area.

In addition to the extinguisher requirements specified for the Intervention vehicle(s) and the intermediary posts fire extinguishers with a minimum capacity of 2kg must be available at the start and the finish.

#### **4.4 Evacuation:** Evacuation routes should be planned for and clearly shown in the safety plan (by a map or diagram).

At all times the evacuation routes immediately adjacent to the course shall be kept clear for Fire, Rescue or Ambulances Services to enter or leave the course.