



Schedule A – Driver & Vehicle Safety (Part 1)

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Appendix Two – Schedule A Driver and Vehicle Safety

Contents Last Updated: 1 March 2021

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Note: Text changes from the previous issue of this Schedule are **highlighted such**. Text changes for grammatical and/or formatting reasons are not highlighted.

Schedule SF: Technical Regulations for Series Space-frame Vehicles. MotorSport NZ will publish these in a separate publication.

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 LVW / 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

“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

“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

“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.

3. General:

3.1 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 races.

(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’ responsibly 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 LWV / 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 logbook is not available for presentation, for whatever reason, the Clerk of the Course may permit the vehicle to compete if:
 - (a) The vehicle is subject 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.

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 this permitted within this schedule. Other than for pump fuel, the mixing of fuels from different commercial sources, or of different grades is forbidden.

- (a) Only an approved fuel and ambient air may enter the engines combustion chamber
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) Commercially available 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 for use 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.

FIA:
FIA 8860-2018* †† FIA 8860-2010* †† FIA 8860-2004* †† FIA 8859-2015* †† FIA 8858-2010* ††
Snell Foundation Inc:
SA 2015* † SA 2010* † SAH 2010* †† SA 2005* † SA 2000* † M 2015 M 2010 M 2005 M 2000 CMR/CMS 2007 (Youth Helmet) K 2015 K 2010 K 2005
SFI Foundation Inc:

SFI Spec 31.1A* SFI Spec 31.2A* SFI Spec 31.1/2005* SFI Spec 41.1/2005 SFI Spec 41.1A SFI Spec 41.2A
British Standards Institute:
BS6658-85 type A/FR (red label), including all amendments † Valid for up to ten(10) years from date of manufacture, dependent upon condition.
European Standard (R22):
'E' Mark 04 or 05 series Note: <i>The series number is not the number in the circle. It is the number located close by, an example being: 05-12345.</i>
Australian Standard:
AS 1698

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:

Chart (1) – Frontal Head Restraint Requirements				
		01 October 2018	01 October 2019	01 October 2020 onwards
Race	Championship	Mandatory	Mandatory	Mandatory
	Sanctioned Series	Strongly Recommended	Strongly Recommended	Mandatory
	National	Strongly Recommended	Strongly Recommended	Mandatory <i>(refer Note 1)</i>
	Clubmans	Recommended	Recommended	Recommended <i>(refer Note 3)</i>
	Historic	Recommended	Recommended	Mandatory <i>(refer Note 2)</i>

Rally	Championship		Mandatory	Mandatory
	National	Recommended <i>(refer Note 4)</i>	Recommended <i>(refer Note 4)</i>	Recommended <i>(refer Note 4)</i>
	Clubmans	Recommended	Recommended	Recommended
ClubSport	Rallysprint	Recommended	Recommended	Recommended <i>(refer Note 4)</i>
	Advanced	Recommended	Recommended	Recommended
	Basic	Optional	Optional	Optional

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.*
4. *The use of FHR's for National Permitted Rallies and Rallysprints is under review and 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 0° to 20° . Shoulder strap length should be kept to a minimum (ideally 200mm – 400mm) and should converge to the attachment point.

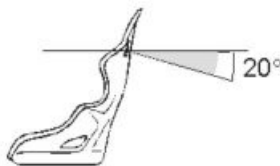
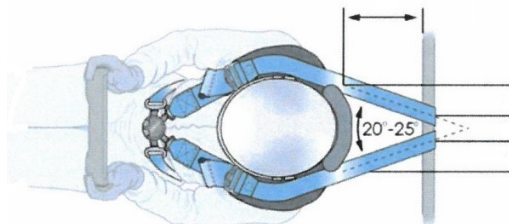


Diagram 4.2 - FHR Safety Harness Mounting Angles

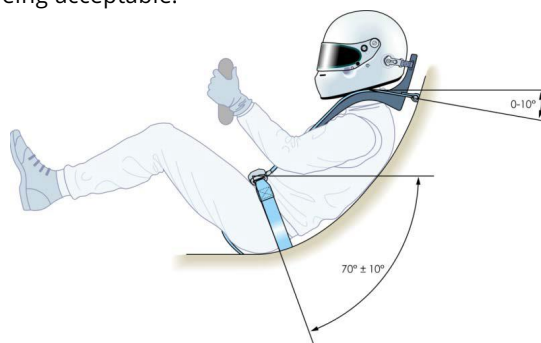


- (b) For Single Seater cars and Sports Racing cars:

- (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 driver 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, SFI Foundation Spec 38.1 Compliant Device Manufacturers may be accessed at www.sfi.foundation.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

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
A	FIA 8856-2000 ⁽¹⁾ FIA 8856-2018 ⁽²⁾	FIA 8856-2000 ⁽¹⁾ FIA 8856-2018 ⁽²⁾	FIA 8856-2000 ⁽¹⁾ FIA 8856-2018 ⁽²⁾	FIA 8856-2000 ⁽¹⁾ FIA 8856-2018 ⁽²⁾	FIA 8856-2000 ⁽¹⁾ FIA 8856-2018 ⁽²⁾	FIA 8856-2000 ⁽¹⁾ FIA 8856-2018 ⁽²⁾
B	FIA Norm 1986 ISO 6940 ⁽⁸⁾ Multi-layer SFI 3.2A/5 ⁽⁴⁾ Multi-layer FR material ⁽³⁾	SFI 3.3, ⁽⁷⁾ ISO 6940 ^(7, 8)	SFI 3.3 ISO 6940 ⁽⁸⁾	SFI 3.3 ISO 6940 ⁽⁸⁾	SFI 3.3 ISO 6940 ⁽⁸⁾	SFI 3.3 ISO 6940 ⁽⁸⁾
C	SFI 3.2A/1, ⁽⁵⁾ ISO 6940 ⁽⁸⁾ Single-layer FR material ⁽³⁾	Cotton ⁽⁶⁾ Wool	Cotton ⁽⁶⁾ Wool	Leather	Leather	–
D	Cotton ⁽⁶⁾	–	–	–	–	–
E	No Req'mt	No Req'mt	No Req'mt	No Req'mt	No Req'mt	No Req'mt

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/5< means SFI Quality Assurance Specifications 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 and 3.2A/3. 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: 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
Race	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
Rally	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
ClubSport	Advanced (excl Rallysprints)	A, B, C	(A, B, C) ⁽⁶⁾	A, B, C	A, B, C	E	E
	Basic	A, B, C, D	(A, B, C) ⁽⁶⁾⁽⁷⁾	A, B, C ⁽⁷⁾	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.

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
ALL EVENTS	Single Seater Sports Racing Car	6 strap	FIA 8853.2016 ² FIA 8853/98 ¹ SFI 16.1 / 16.5	FIA up to 10 years ³ FIA up to 10 years ³ SFI ⁴
RACE EVENTS Championship and Accredited Series and all RALLY EVENTS including Rallysprints and Targa	Series Production Vehicle Saloon GT Sports Car	5 strap (or 6 strap as above)	FIA 8853/98 ¹ SFI 16.1 / 16.5	FIA up to 10 years ³ SFI ⁴
		4 strap (or 5 or 6 strap as above)	FIA 8853/98 ¹ FIA 8854/98	FIA up to 10 years ³
			SFI 16.1 / 16.5	SFI ⁴
			ECE / R16 04 AS/NZS 2596	R16 04 and AS/NZS 2596 have no specified expiry ⁵
CLUBSPORT EVENTS and all RACE EVENTS 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 ¹ FIA 8854/98 ¹	FIA up to 10 years ³
			SFI 16.1 / 16.5	SFI ⁴
			ECE / R16 04 AS/NZS 2596	R16 04 and AS/NZS 2596 have no specified expiry ⁵
		3 strap (lap and diagonal)	NZTA accepted standards ⁶	NZTA accepted standards have no specified expiry ⁵

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 manufacturers 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.

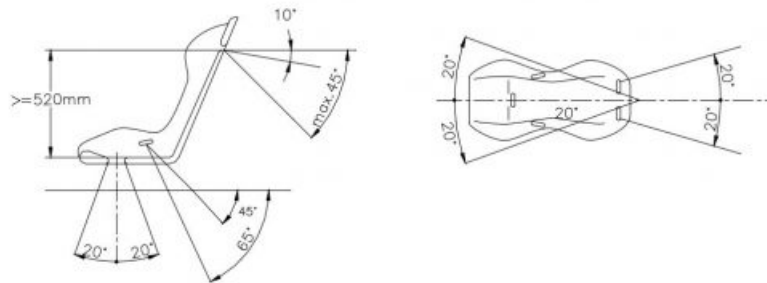


Diagram 4.4(4) Harness Strap Mounting Angles

- (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 bodyshell, a steel reinforcement plate three(3)mm thick and with an area of at least 40cm²(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 bodyshell 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 120cm² (per plate) shall be fully welded in full contact with the surface of the bodyshell.
 - (v) If the bar is to be dismantable, footing plates shall be welded to the ends of the bar which in turn shall be bolted to the reinforcement plates welded to the bodyshell 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*)

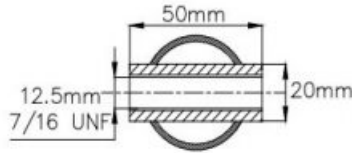


Diagram 4.4(5) - Eyebolt Insert

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 note 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 Driver Nets:

(1) **Window Nets:** Are not considered mandatory under this Schedule although where fitted shall comply with the following:

- (a) Window nets shall close the window aperture to the steering wheel, and
- (b) 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 Nets:** Driver 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.

Recommendations: ~~In races,~~ window nets are strongly recommended where doors/windows (adjacent to the occupants) are absent or modified in any way.

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

(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) Refer Note 1	Optional	Optional (but recommended)

	All Vehicles exceeding 2000cc capacity competing in an Accredited Series	Mandatory	-
RALLY	All Vehicles	Mandatory	-
CLUBSPORT ADVANCED <i>(refer Notes 2 and 4)</i>	All Open Vehicles	Optional <i>(Refer note 2)</i>	Mandatory
	All Closed Vehicles	Optional <i>(Refer note 2)</i>	Optional (but recommended)
CLUBSPORT BASIC <i>(refer Notes 4 and 5)</i>	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 1 September 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 occupants 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.

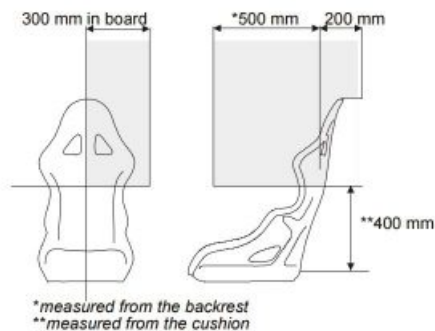


Diagram 4.6(6) – Mandatory Area Requiring Protective Padding

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:

FIA:	FIA 8855-1992
	FIA 8855-1999*
	FIA 8862-2009*
SFI:	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) Alternative mounting points may be fabricated, each incorporating a reinforcement plate measuring at least 40cm² x 3mm. If the reinforcement plate is not welded to the bodyshell a counter-plate shall also be used, or
 - (iii) Transverse members incorporating inserts used in combination with reinforcement plates measuring at least 40cm² x 3mm which may be welded or bolted to the bodyshell. 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
Race and ClubSport Events except for: Autocrosses, Standing Sprints, Motorkhanas, Competitor Coaching and Sporting Trials	Powder BE or ABE <i>(refer Note 3)</i>	Stored pressure with gauge <i>(refer Note 1)</i>	0.9kg	5 B	6 Years <i>(refer Note 2)</i>
	Foam AFFF / AR-ARFF / AR-FFFR		1.0litre	5 B	As per manufacturers instructions
Rally / Targa Events	Powder BE or ABE <i>(refer Note 3)</i>	Stored pressure with gauge <i>(refer Note 1)</i>	2.0kg	20 B	6 Years <i>(refer Note 2)</i>
	Foam AFFF / AR-ARFF / AR-FFFR		2.4litres	20 B	As per manufacturers instructions
Any	Foam AFFF / AR-ARFF / AR-FFFR	Plumbed-in System	2.2litres	N/A	As per manufacturers instructions <i>(refer Note 5)</i>
Rally FIA Groups	Mandatory compliance with FIA Appendix J <i>(refer Note 4)</i>				

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 ralliesprint 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 manufacturers 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 /LVW 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 LVTA 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:**

FIA:	FT3 1999*
	FT3.5*
	FT5*
SFI:	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).

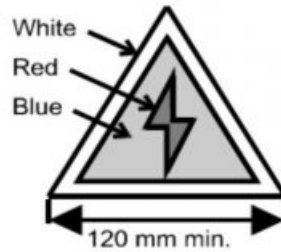


Diagram 5.4(1) - Circuit Breaker External Marking

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.

Li-ion

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).

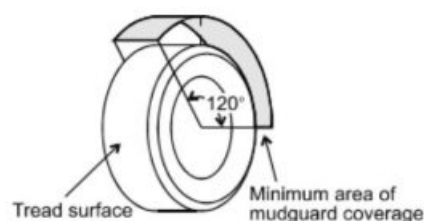


Diagram 5.8 - Minimum Tyre Tread Coverage

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 bodyshell, 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.*
3. *It is recommended that window nets are used adjacent to occupants when the side windows are not in the*

closed position.

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 50cm². 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.

(b) 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 wifi 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 Mud-flaps:** 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 mud-flaps 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 vehicles 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 vehicles 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.

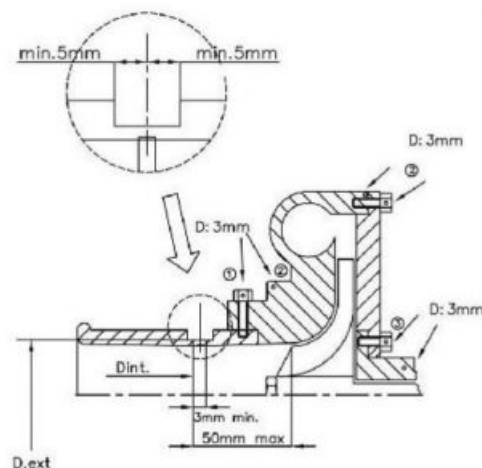


Diagram 7.3 - Restrictor Detail Applicable to Forced Induction Vehicles used in Rallies

- (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.

(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

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

(i) The manufacturers kerbside weight (referenced from www.carfolio.com) if utilising the vehicles original engine, or

(ii) After applying the applicable equivalence factor(s) the following weight relative to the vehicles 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 LWV 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).
- (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), 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.

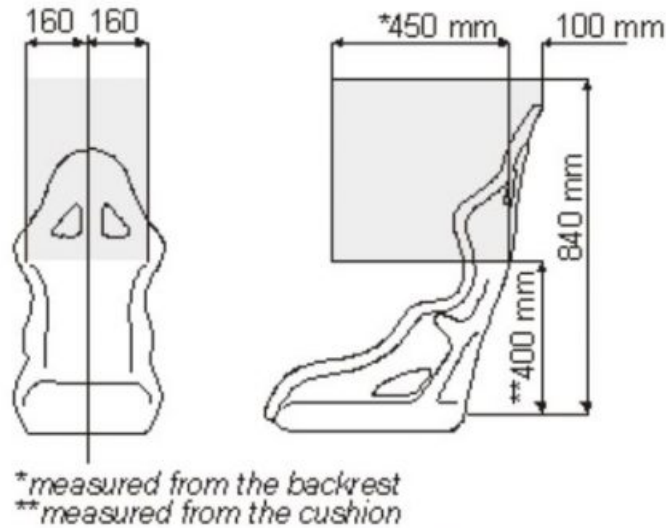


Diagram 8.3 - Headspace requirements.

- (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) A minimum Safety Cage as per diagrams 8.3(6)(d) below incorporating forward reinforcements (terminating at a substantial structure such as the suspension strut tower) in full compliance with this Schedule, 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

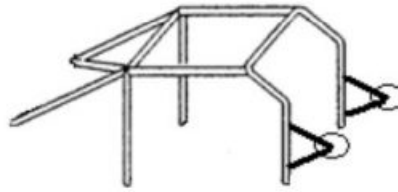


Diagram 8.3(6)(d) – forward reinforcement

(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 car 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.lvta.org.nz).