

# AUSTRALIAN HISTORIC TOURING CAR ASSOCIATION

5<sup>th</sup> CATEGORY – HISTORIC RACING

GROUP N

AHTCA APPROVED VEHICLE  
INFORMATION SHEET

This form details information about the vehicle identified below, which is a model in the 5<sup>th</sup> Category Historic Cars group.

To be issued with a [Historic Log Book](#), cars need to comply with the specifications, the physical appearance shown in the illustrations and the general historic rules as detailed in the current Motorsport Australia Manual of Motor Sport.

Make of Car	Alfa Romeo
Model	Giulia 1600 TI Giulia 1600 TI Super
Period of Original Manufacture	1962 – 1967 (Giulia 1600 TI) 1963 – 1970 (Giulia 1600 TI Super)
Motorsport Australia Historic Group	NbE
Date of issue of this document	23 June 2023



**This information sheet is a compilation of relevant extracts from the documentation listed below:**

Note that for Historics, all the documents listed **must** be examined together.

## **Historic**

- [Historic Equipment Chart](#)
- [2023 Motorsport Manual – Specifications of Automobiles – 5th Category – Historic Cars – General Regulations](#)
- [2023 Motorsport Manual – Specifications of Automobiles – 5th Category – Historic Cars – Events](#)

### **Vehicle Eligibility**

- [2023 Motorsport Manual – Specifications of Automobiles – 5th Category – Historic Cars – Vehicle Eligibility – General Requirements](#)
- [2023 Motorsport Manual – Specifications of Automobiles – 5th Category – Historic Cars – Group A, C, N, & U – Touring Cars](#)
- [2023 Motorsport Manual – Specifications of Automobiles – 5th Category – Historic - SEATS FOR GROUPS NA, NB, NC, SA, SB AND SC](#)
- [2023 Motorsport Manual – Specifications of Automobiles – 5th Category – Historic Cars Approved Tyre List: Group N & S](#)
- **Equipment Standards and Guidelines**
- [2023 Motorsport Manual – Vehicle Eligibility – 5th Category – Historic – Component Substitution Criteria](#)
- [2023 Motorsport Manual – Vehicle Eligibility – 5th Category – Historic – Equipment Standards and Guidelines \(Safety Cages/Roll Bars\)](#)
- [2023 Motorsport Manual – Vehicle Eligibility – 5th Category – Historic – Equipment Standards and Guidelines \(Firewalls, Scattershields & Chainguards\)](#)
- [Group N Specifications](#)

## **Equipment Standards and Guidelines**

### **General Requirements for Cars and Drivers**

- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Definitions – Technical](#)
- [2023 Motorsport Manual – Classification of Automobiles](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule A, Schedule B](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule C](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule D: Apparel](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule E – Wheels and Tyres](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule F: Aerofoils](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule G - Fuel](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule H – Fire Extinguishers](#)
- [2021 Motorsport Manual – General Requirements for Cars and Drivers - Schedule I: Safety Harness & Window Nets](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule J – Safety Cage Structures](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule K – Markings on Automobiles](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule L: Automobile Log Books](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers – Schedule M: Scatter Shields](#)
- [2023 Motorsport Manual – General Requirements for Cars and Drivers Schedule N - Fuel Tanks & Refuelling](#)

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## Section 1. Chassis

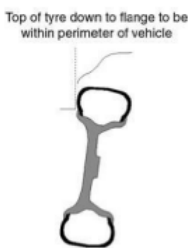
### Section 1.1. Chassis Frame

<b>Description</b>	Unitary construction
<b>Period of Manufacture</b>	1963 – 1964
<b>Manufacturer</b>	Alfa Romeo
<b>Chassis Number from</b>	AR*
<b>Chassis number location</b>	RHS Firewall
<b>Material</b>	Steel
<b>Comments</b>	None
	Also refer to <a href="#">Chassis/Bodywork</a>

### Section 1.2. Dimensions

	Front	Rear
<b>Track</b>	1310 mm (max)	1270 mm (max)
	Also refer to <a href="#">Track</a> The distance between the centres of the contact patches of the tyres on the same axle as presented for competition.	
<b>Wheelbase</b>	mm Refer <a href="#">Chassis/Bodywork</a> – page 3. The original wheelbase dimensions must be retained.	
<b>Overall length</b>	1270 mm (max)	
<b>Dry weight</b>	910 kg (homologated weight)	

## Section 2. Bodywork

<b>Definitions</b> <b>7 Touring cars</b>	Refer <a href="#">Chassis/Bodywork</a> – page 3. The bodywork and body fittings must be as supplied by the manufacturer. Chassis or chassis-body unit, including the floorpan, must be original and unmodified, save for the strengthening techniques provided for under the Group N general regulations. The original wheelbase dimensions must be retained. The track dimension for all Groups are free save that the upper part of the tyre, down to the flange over the wheel hub centre must be within the perimeter of the vehicle when viewed vertically from above (see diagram 1).	
		
<b>Type</b>	Closed	
<b>Material</b>	Steel	
<b>Number of seats</b>	Five	
<b>Number of doors</b>	Four	
<b>Comments</b>	Doors:	Steel
	Body:	Steel
	Bonnet/Boot:	Steel
	Window - rear	Plexiglass (TI Super only)

	Inner lights can be removed to allow fresh air intake (TI Super only).
<b>Bumper bars</b>	Refer <a href="#">Chassis/Bodywork</a> – page 3. Bumper bars must be retained.
<b>Mudguard flares/extensions</b>	Refer <a href="#">Mudguards flares/extensions</a> – pages 2 and 12 Flares and/or extensions to the guards are not permitted unless originally fitted by the manufacturer. Mudguard flares/extensions – flares and/or extensions to the guards are not permitted unless originally fitted to the make and model in question by the manufacturer.
<b>Wheel opening</b>	Refer <a href="#">Mudguards flares/extensions</a> – page 11 The inner lip of the wheel opening may be folded back for tyre clearance.
<b>Seam welding</b>	Refer <a href="#">Seam welding</a> – page 3. It is permitted to seam weld the body. Save for underneath the vehicle, seam welding must not be visible externally on the exterior of the vehicle
<b>Safety</b>	Refer <a href="#">Safety</a> – page 2. Vehicles in all historic groups, while competing in competitions specifically limited to such vehicles and mixed category single-car speed competitions, are exempted from normal Motorsport Australia requirements in respect of bodywork.
<b>Undertrays/fairings</b>	Refer <a href="#">Undertrays/fairings</a> – page 3. The use of undertrays, fairings etc, designed to improve the aerodynamic form of the automobile shall not be permissible unless supplied as standard equipment.
<b>Strut Braces</b>	Refer <a href="#">Strut Braces</a> – page 3 Strut braces solely between the front strut/shock absorber towers are permitted save for those vehicles with alternative bracing structures as standard, strut braces solely between the front strut/shock absorber towers are permitted. The fitment of strut braces should ideally be by the manufacturer's original fixtures, however, the welding or bolting of additional lugs to the body (e.g. inner guard or strut tower) for the purpose of mounting the strut brace is permissible. The strut brace itself must be attached by bolts, and must be removable.
<b>Strengthening</b>	Refer <a href="#">Strut Braces</a> – page 3 Minor strengthening by the addition of sheetmetal is permitted provided such strengthening follows the contour of the bodyshell. The sheetmetal being added must be of the same gauge/thickness as of the parent material.
<b>Additional control arms</b>	Also refer to <a href="#">Suspension</a> – page 13. Additional control arms may be fitted front and rear but in doing so, the original components must remain functional. The method of mounting is <a href="#">free</a> , including the use of spherical or rose-type joints, providing all such control arms remain outside the original bodywork.
<b>Sound deadener</b>	Refer <a href="#">Sound deadener</a> – page 3 Sound deadener (bitumen and fabric types) may be removed from the body shell and hung components
<b>Fiberglass</b>	Refer to <a href="#">Equipment</a> . Permitted only where used on the particular vehicle in the period.
<b>Alteration</b>	Refer <a href="#">Suspension</a> – page 10 the body may not be altered to incorporate any system facilitating the adjustment of the ride height.
<b>Nuts and Bolts</b>	Refer <a href="#">Nuts and Bolts</a> – page 3 Nuts and bolts may be locked; nuts, bolts, screws, washers, clips and gaskets may be replaced with non original items. In the case of

	<p>nuts and bolts these may be larger replacements, captive nuts, lock nuts etc.</p> <p>Refer also to <a href="#">Equipment</a> - Permitted – twelve point nuts, and Phillips head screws.</p>
<b>Quick release type fasteners</b>	<p>Refer <a href="#">Nuts and Bolts</a> – page 3</p> <p>quick release type fasteners are specifically prohibited.</p>
<b>Free</b>	<p>Refer <a href="#">Free</a> – page 2</p> <p>A component, deemed to be free under these regulations may, where fitted to the vehicle as standard, be removed or replaced. Where the removed component is replaced, the replacement is not restricted in design or material (unless otherwise specified) providing it performs only the same function. No modification may be made to surrounding components or bodywork to which the replacement is fitted, unless otherwise permitted.</p> <p>Where freedom is granted for the fitment of any component, such freedom is restricted to that component and such modifications to enable fitment of it, but is limited to the following: holes may be drilled for fasteners, e.g., bolts, screws, rivets etc. Holes of the minimum dimensions necessary for the passage of wiring and fuel, brake, and oil lines/hoses are permitted. For the purpose of this article, a component shall be deemed to include all other components with which it is integral, or to which it is attached by means the manufacturer intended to be permanent. Where a system is deemed as free, all components solely associated with that system are regarded as free, as per above.</p>

### Section 3. Bonnet

	<p>Refer to <a href="#">Body shell</a> - page 1.</p> <p>Components such as doors, bonnet, bootlid and mudguards which are readily demountable are not deemed to be part of the body shell.</p>
<b>Fastening systems</b>	<p>Refer to <a href="#">Schedule B</a> - page 1.</p> <p>Each automobile in a circuit race shall, of necessity, also be required to be fitted with two separate fastening systems on any bonnet or other panel where the leading edge can be raised. The fastening systems shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>(i) to be deemed separate, a fastening system shall continue to function if the second system is removed in its entirety;</li> <li>(ii) they shall be of adequate strength and limited elasticity and range of movement;</li> </ul> <p>they shall simultaneously hold the bonnet or panel closed or as an alternative for speed events only, one fastening system shall hold the bonnet or panel closed and its release shall allow the bonnet or panel to be raised to provide access to a second separate fastening system fitted within the automobile. The second fastening system shall prevent the bonnet or panel from being raised more than 150mm from the fully closed position.</p> <p>Refer to <a href="#">Schedule C</a> - page 1.</p> <p>For a non-road-registered series production Automobile any cable-operated bonnet or engine cover release mechanism must be disabled and replaced with at least two fastening systems in accordance with <a href="#">Schedule B</a>.</p>
<b>Fastening systems</b>	<p>Refer to <a href="#">Schedule B</a> - page 1.</p> <p>Each automobile in a circuit race shall, of necessity, also be required to be fitted with two separate fastening systems on any bonnet or other panel where the leading edge can be raised. The fastening systems shall meet the following requirements:</p>

	<p>(iii) to be deemed separate, a fastening system shall continue to function if the second system is removed in its entirety;</p> <p>(iv) they shall be of adequate strength and limited elasticity and range of movement;</p> <p>(v) they shall simultaneously hold the bonnet or panel closed or as an alternative for speed events only, one fastening system shall hold the bonnet or panel closed and its release shall allow the bonnet or panel to be raised to provide access to a second separate fastening system fitted within the automobile. The second fastening system shall prevent the bonnet or panel from being raised more than 150mm from the fully closed position.</p>
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## Section 4. Windscreen

<b>Windscreen</b>	<p>Refer <a href="#">Windscreen</a> – page 2.</p> <p>A laminated windscreen is required in races and in multiple car speed events. However, in the event that a laminated screen is unavailable, approval may be given on individual application to Motorsport Australia for the fitment of a Lexan or Perspex windscreen.</p>
<b>Any glass windscreen Tint/colouring</b>	<p>Each automobile in a circuit race shall, of necessity, in addition to the provisions of <a href="#">Schedules A and B</a>, be fitted only with laminated glass in any glass windscreen. Windows, including windscreens, shall not be coloured or tinted unless fitted as standard to a production automobile and compliant with AS2080;</p> <p>Refer <a href="#">Schedule A</a> – Page 1.</p> <p>Each automobile shall, of necessity, in any competition, have any window or windscreen fitted made from a material which is clear or, if tinted, compliant with AS 2080;</p>

## Section 5. Windows

<b>Any glass windscreen Tint/colouring</b>	<p>Each automobile in a circuit race shall, of necessity, in addition to the provisions of <a href="#">Schedules A and B</a>, be fitted only with laminated glass in any glass windscreen. Windows, including windscreens, shall not be coloured or tinted unless fitted as standard to a production automobile and compliant with AS2080;</p> <p>Refer <a href="#">Schedule A</a> – Page 1.</p> <p>Each automobile shall, of necessity, in any competition, have any window or windscreen fitted made from a material which is clear or, if tinted, compliant with AS 2080;</p>
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## Section 6. Mirrors

<b>Requirement</b>	<p>Refer to <a href="#">Schedule A</a> - page 1.</p> <p>Each automobile in a circuit race shall, of necessity, also be required to be fitted with not fewer than two functional rear vision mirrors each of at least 50cm<sup>2</sup>.</p>
<b>Window nets</b>	<p>Refer <a href="#">Schedule I</a> – Page 2.</p> <p>The net may be locally modified to preserve the driver's view of the external mirror.</p>

## Section 7. Suspension

### Section 7.1. Front Suspension

<b>Description</b>	<p>Independent - lower Wishbone &amp; Upper Control Arms</p> <p>Also refer to <a href="#">Suspension</a>.</p> <p>The original form and type of suspension only shall be employed (e.g., a semi-elliptic leaf spring suspended live rear axle may not be replaced by a coil spring suspended De Dion type, and so on).</p>
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<b>Suspension points</b>	Also refer to <a href="#">Suspension</a> . Suspension pickup points may be moved by up to 30mm
<b>Springs</b>	
<b>Medium</b>	Coil
<b>Type and location</b>	Also refer to <a href="#">Suspension</a> . Springs are <a href="#">free</a> provided that the type and location are unchanged.
<b>Ride Height</b>	Also refer to <a href="#">Suspension</a> . Adjustable ride height is permitted, save that the body may not be altered to incorporate any system facilitating the adjustment of the ride height.
<b>Dampers</b>	
<b>Type</b>	Telescopic
<b>Adjustable</b>	Yes Also refer to <a href="#">Suspension</a> . Shock absorbers are <a href="#">free</a> , save that they may not utilise external gas/fluid reservoirs and/or canisters. Also refer to <a href="#">Shock Absorbers: Production Based Groups</a>
<b>Anti-Sway Bar</b>	Fitted
	Also refer to <a href="#">Sway Bars</a> . Sway bars may be fitted or removed from the front provided the sway bar does not perform any other function. Such sway bars must be of a conventional type, i.e., made of a solid steel bar bent to shape. The diameter of the sway bar is <a href="#">free</a> . Hollow sway bars are not permitted. The method of mounting is <a href="#">free</a> . The end links on bars may incorporate the use of spherical or rose type joints. Sway bars that perform more than one function can only be varied in diameter.
<b>Suspension adjustable</b>	Yes
<b>Method</b>	Caster and Camber - Threaded
	Also refer to <a href="#">Suspension</a> . A maximum of 5° static negative camber is permitted for wheels on the front axle.
<b>Additional control arms</b>	Also refer to <a href="#">Suspension</a> – page 13. Additional control arms may be fitted front and rear but in doing so, the original components must remain functional. The method of mounting is <a href="#">free</a> , including the use of spherical or rose-type joints, providing all such control arms remain outside the original bodywork. Where a vehicle is fitted with a Panhard rod as standard equipment, its mounting points may be moved without restriction, or it may be removed and replaced with a Watts linkage. Spherical rod ends may be employed in either application.
<b>Uniballs</b>	Refer <a href="#">Equipment</a> . Permitted only where used on the particular vehicle in the period.

## Section 7.2. Rear suspension


<b>Description</b>	Live Axle -Two Lower Trailing Arms and one Upper Trailing Arm Also refer to <a href="#">Suspension</a> . The original form and type of suspension only shall be employed (e.g., a semi-elliptic leaf spring suspended live rear axle may not be replaced by a coil spring suspended De Dion type, and so on).
<b>Suspension points</b>	Also refer to <a href="#">Suspension</a> . Suspension pickup points may be moved by up to 30mm
<b>Spring Medium</b>	Coil
<b>Type and location</b>	Also refer to <a href="#">Suspension</a> . Springs are <a href="#">free</a> provided that the type and location are unchanged.
<b>Ride Height</b>	Also refer to <a href="#">Suspension</a> .

	Adjustable ride height is permitted, save that the body may not be altered to incorporate any system facilitating the adjustment of the ride height.
<b>Rear axle camber</b>	Refer <a href="#">Final Drive</a> – page 5. Rear axle camber must be as per the manufacturer's specifications.
<b>Housings</b>	Refer <a href="#">Strengthening</a> – page 3. Original axle housings as supplied by the vehicle manufacturer must be employed.
<b>Housings Strengthening</b>	Refer <a href="#">Strengthening</a> – page 3. Strengthening and reinforcement of such rear axle housings, and the addition of bracketry for the attachment of rear axle locating arms is permitted.
<b>Dampers</b>	
<b>Type</b>	Telescopic
<b>Adjustable</b>	Yes Also refer to <a href="#">Suspension</a> . Shock absorbers are <a href="#">free</a> , save that they may not utilise external gas/fluid reservoirs and/or canisters. Also refer to <a href="#">Shock Absorbers: Production Based Groups</a>
<b>Anti-Sway Bar</b>	Also refer to <a href="#">Sway Bars</a> . Sway bars may be fitted or removed from the rear provided the sway bar does not perform any other function. Such sway bars must be of a conventional type, i.e., made of a solid steel bar bent to shape. The diameter of the sway bar is <a href="#">free</a> . Hollow sway bars are not permitted. The method of mounting is <a href="#">free</a> . The end links on bars may incorporate the use of spherical or rose type joints. Sway bars that perform more than one function can only be varied in diameter.
	Also refer to <a href="#">Sway Bars</a>
<b>Suspension adjustable</b>	No
<b>Method</b>	N/A
<b>Additional control arms</b>	Also refer to <a href="#">Suspension</a> . Additional control arms may be fitted front and rear but in doing so, the original components must remain functional. The method of mounting is <a href="#">free</a> , including the use of spherical or rose-type joints, providing all such control arms remain outside the original bodywork. Where a vehicle is fitted with a Panhard rod as standard equipment, its mounting points may be moved without restriction, or it may be removed and replaced with a Watts linkage. Spherical rod ends may be employed in either application.
<b>Uniballs</b>	Refer <a href="#">Equipment</a> . Permitted only where used on the particular vehicle in the period.

## Section 8. Steering

	Also refer to <a href="#">Steering</a> . The steering system employed for the year model in question, by the original manufacturer, must be utilised. Only Motorsport Australia approved alternative components may be used.
<b>Type</b>	Recirculating Ball
<b>Make</b>	Burman
<b>Comment</b>	None
<b>Locking mechanism</b>	Refer <a href="#">Schedule A</a> – Page 1. Each automobile shall, of necessity, in any competition if manufactured prior to 1 January 1978 (or otherwise not complying with ADR25A) and not registered for use on public roads, have any steering column locking device removed or disabled.

## Section 9. Wheels and Tyres

<b>Wheel Type</b>			
<b>Original</b>		Pressed disc	
<b>Material</b>			
<b>Original</b>		Steel	
<b>Allowed</b>		Alloy	
<b>Fixture method</b>		Bolt on	
<b>Nmbr of Studs</b>		Four	
<b>Wheels</b>	<p>Refer to <a href="#">Wheels</a>.</p> <p>Wheel diameter must be as originally supplied by the manufacturer or that which was deemed by Motorsport Australia to have been commonly used on the model in competition during the period as outlined in the vehicle's Specification Sheet</p> <p>Wheels may be replaced by period style alloy wheels.</p> <p>Also refer to <a href="#">Wheels</a>.</p> <p>Wheel: flange and rim.</p> <p>Complete Wheel: flange, rim and tyre. For measurement the tyre shall be inflated to the tyre manufacturer's recommended pressure.</p> <p>Also refer to <a href="#">Wheel and Tyres</a></p> <p>Wheels are required to be original in diameter and style.</p>		
	<b>Front</b>	<b>Rear</b>	
<b>Original</b>	5" x 15" 5.5" x 15"	5" x 15" 5.5" x 15"	
<b>Allowed</b>	6" x 15"	6" x 15"	
<b>Wheel spacers</b>	<p>Allowed – refer to <a href="#">Wheel spacers</a>.</p> <p>A maximum of one metallic spacer may be used behind each wheel.</p>		
<b>Wheel opening</b>	<p>Refer <a href="#">Mudguards flares/extensions</a> – page 12</p> <p>The inner lip of the wheel opening may be folded back for tyre clearance.</p>		
<b>Tyres</b>	<p>Refer to <a href="#">Wheels and Tyres</a></p> <p>Tread wear indicators as provided by the tyre manufacturer shall be the definitive indicator of tread depth.</p> <p>Prior to practice or racing, each tyre must have tread in excess of the wear indicator save on the shoulder where localised wear may occur.</p> <p>Refer to <a href="#">Tyres</a>.</p> <p>Re-grooving of tyres is not permitted.</p> <p>The upper part of the tyre, down to the wheel rim flange over the wheel hub centre must be within the perimeter of the vehicle when viewed vertically from above.</p> <div style="text-align: center;">  </div> <p>Tyres must be of approved type radial or cross-ply construction with a 60% minimum aspect ratio.</p> <p>Refer to <a href="#">Approved Tyre List</a></p>		
<b>Valve Caps</b>	<p>Also refer to <a href="#">Wheels and Tyres</a>.</p> <p>Each tyre valve shall be fitted with a cap which effectively prevents leakage in use.</p>		

## Section 10. Brakes

<b>Description</b>	Refer to <a href="#">Brakes</a> . The original form and type of braking system shall be employed.	
	<b>Front</b>	<b>Rear</b>
<b>Type</b>	Disc, vented	Disc, solid
<b>Dimensions</b>	286 mm x 12.5 mm	246 mm x 10 mm
<b>Material</b>	Cast iron	Cast iron
<b>Nmbr cylinders/pots per wheel</b>	Two	One
<b>Actuation</b>	Hydraulic	Hydraulic
<b>Caliper make</b>	ATE	
<b>Caliper type</b>	Tandem	
<b>Caliper material</b>	Cast iron	
<b>Master Cylinder make</b>	Bonaldi	
<b>Type</b>	Single	
<b>Adjustable bias</b>	Refer to <a href="#">Brakes</a> – page 13 Brake bias adjustment permitted; adjustment by driver in normal driving position not permitted	
<b>Servo fitted</b>	Some models	

<b>Definition</b>	Also refer to <a href="#">Friction surface of the Brakes</a> – page 3.
<b>Friction surface/swept area</b>	Surface swept by the linings on the drum, or the pads on both sides of the disc, when the wheel achieves a complete revolution.
<b>Components replacements</b>	Refer to <a href="#">Brakes</a> – page 10 It is permitted to fit alternative calipers of a type available pre-1965. Drum brake systems may have components replaced with those of a production vehicle of the period provided the swept area and diameter of the drum does not change. Non-standard pedal boxes are permitted provided the original pedal location & configuration is maintained i.e.; where the pedals are pendulum or floor mounted they must retain this configuration. Brake hoses are free. Drum brakes may be drilled for the purpose of cooling, but such holes may not be drilled in the swept braking surface of the drum. The replacement of original disc rotor assemblies with those of two or three-piece construction of a similar appearance is permitted. Original hubs must be retained, machining is permitted. Any adaptor between hub and disc rotor must be solid and be of aluminium or steel. The use of adaptor plates for the attachment of brake calipers or intermediate spacers within brake calipers to accommodate variations in rotor and brake pad thickness is permitted.
<b>Dimension tolerance</b>	Refer to <a href="#">Brakes</a> – page 6 The major brake dimensions of drum brakes (i.e., internal drum diameter and width) shall be as supplied as original equipment with a <b>tolerance</b> of 3mm permitted on drum diameter. Drum brakes may not be replaced by disc brakes.
<b>Lining Materials</b>	Refer to <a href="#">Brakes</a> – page 6 Disc pad and drum brake lining <b>materials</b> are <u>free</u> .
<b>Backing plates</b>	Refer to <a href="#">Brakes</a> – page 6 <b>Backing plates</b> may be ventilated and/ or fitted with cooling ducts.
<b>Master cylinders</b>	Refer to <a href="#">Brakes</a> – page 6 Dual or tandem master cylinders may be fitted.
<b>Operation</b>	Refer to <a href="#">Brakes</a> – page 6 Mechanical operation may be converted to hydraulic operation.
<b>Brake dust/stone shields</b>	Refer to <a href="#">Brakes</a> – page 6 Disk brake <b>dust/stone shields</b> may be removed.

<b>Brake discs</b>	Refer to <a href="#">Brakes</a> – page 10 Machining of the rotor is permitted. Refer to <a href="#">Brakes</a> – page 6 Disc brakes may not be <b>grooved or drilled</b> . Disk brake <b>dust/stone shields</b> may be removed.
<b>Twin leading shoe brakes</b>	Permitted. Refer <a href="#">Equipment</a>
<b>Cooling ducts</b>	Refer to <a href="#">Brakes</a> – page 6 Front and Rear Brake cooling ducts may be fitted. Front ducts to a maximum width of 300mm on each side vehicle. If brake cooling ducts or scoops are fitted, they must be separated by a minimum of 300mm so as not to form an aerodynamic aid and their sole function shall be to assist in the supply of air to the brakes. Any Rear brake ducting must be wholly contained within the perimeter of the bodywork. <b>Brake cooling ducts</b> may be fitted. If brake cooling ducts or scoops are fitted, they must be separated by a minimum of 300mm, so as not to form an aerodynamic aid and their sole function shall be to assist in the supply of air to the brakes.
<b>Park brake system</b>	Refer to <a href="#">Brakes</a> – page 6 It is permitted to render the foot and/or hand operated park brake systems inoperative whilst retaining the operating mechanism in its original position.
<b>Adaptor plates</b>	Refer to <a href="#">Brakes</a> – page 10 The use of <b>adaptor plates</b> for the attachment of brake calipers or intermediate spacers within brake calipers to accommodate variations in rotor and brake pad thickness is permitted.
<b>Pedal boxes</b>	Refer to <a href="#">Brakes</a> – page 13 Non-standard <b>pedal boxes</b> are permitted provided the original pedal location & configuration is maintained i.e.; where the pedals are pendulum or floor mounted, they must retain this configuration.
<b>Brake bias</b>	Brake bias adjustment permitted; adjustment by driver in normal driving position not permitted Refer to <a href="#">Brakes</a> – page 13 It is not permitted for <b>brake bias</b> to be adjustable by the driver when in the normal driving position.
<b>Brake hoses</b>	Refer to <a href="#">Brakes</a> – page 13 Brake hoses are free.
<b>Brake lines</b> <b>Braided</b>	Refer to <a href="#">Equipment</a> . Permitted.

## Section 11. Engine

### Section 11.1. Specifications

<b>Description</b>	Refer to <a href="#">Engine</a> . Engine: the original type and design of the cylinder block as originally used in the make, model and year of the vehicle in question or a Motorsport Australia-approved alternative must be employed. Internal engine components (e.g., pistons, piston rings, connecting rods, crankshaft, bearings and gaskets) are free, subject to relevant bore and stroke restrictions. Main bearing cap supports or girdles may be used. The engine block may be “sleeved” to achieve the correct bore dimensions.
<b>Make</b>	Alfa Romeo
<b>Model</b>	Giulia TI Super
<b>Nmbr of cylinders</b>	Four
<b>Configuration</b>	In-line

<b>Cylinder block material</b>	Alloy Also refer to <a href="#">Cylinder Block</a> . The crankcase and the cylinders.
<b>Two/Four Stroke</b>	Four
<b>Bore – original</b>	78 mm
<b>Maximum allowed</b>	79.5 mm Refer to <a href="#">Engine</a> . The bore may be increased by a maximum of 1.5mm, and the stroke must remain standard as specified for the make and model. Where increasing the bore size up to 1.5mm increases the engine cubic capacity above the original capacity class limit, for competition purposes the vehicle will remain within its original cubic capacity class.
<b>Stroke – original</b>	82 mm
<b>Capacity</b>	Also refer to <a href="#">Cylinder Capacity</a> . Volume V generated in cylinder (or cylinders) by the upward or downward movement of the piston(s). $V = 0.7854 \times b^2 \times s \times n$ where:        b = bore s = stroke n = number of cylinders
<b>original</b>	1567 cc
<b>Maximum allowed</b>	1628 cc
<b>Cooling method</b>	Liquid
<b>Identifying marks</b>	RHS front or LHS rear AR00516.***** AR00548.***** AR00551.***** AR00526.***** AR00585.***** AR00528.***** AR00514.***** AR00502.***** AR00536.*****
<b>Comments</b>	None
<b>Internal engine components</b>	Refer to <a href="#">Engine</a> . Internal engine components (e.g., pistons, piston rings, connecting rods, crankshaft, bearings and gaskets) are free, subject to relevant bore and stroke restrictions. Main bearing cap supports or girdles may be used. The engine block may be “sleeved” to achieve the correct bore dimensions.
<b>Bore and stroke</b>	Refer to <a href="#">Engine</a> . The engine block may be “sleeved” to achieve the correct bore dimensions. The bore may be increased by a maximum of 1.5mm, and the stroke must remain standard as specified for the make and model. Where increasing the bore size up to 1.5mm increases the engine cubic capacity above the original capacity class limit, for competition purposes the vehicle will remain within its original cubic capacity class.
<b>Belts and pulleys</b>	Refer to <a href="#">Engine</a> . Toothed belts driving engine ancillaries are permitted. Engine pulleys are free. Note: Save that the original type of drive belt must be retained, engine pulleys are free.
<b>Camshafts</b>	Refer to <a href="#">Engine</a> . Save that the original number and location must be retained, camshafts are free.
<b>Engine mountings</b>	Refer to <a href="#">Engine</a> – page 5. The engine mountings may be replaced by components of alternative design provided that the engine remains in the original position in relation to the body/chassis with a tolerance of $\pm 8$ mm.

<b>Roller rockers</b>	Permitted. Refer <a href="#">Equipment</a> .
<b>Flywheel</b>	Refer page 5 - <a href="#">Transmission</a> . The flywheel must be of the original diameter, as determined by the ring gear, but is otherwise free.

## Section 11.2. Cylinder Head

<b>Description</b>	Refer to <a href="#">Engine</a> . The original type and design of cylinder head casting as originally used in the make, model and year of the vehicle in question, or a Motorsport Australia-approved alternative must be employed.		
<b>Make</b>	Alfa Romeo		
<b>Nmbr of valves per cylinder</b>		<b>Inlet</b>	<b>Exhaust</b>
	Two	One	One
<b>Nmbr of ports total</b>		<b>Inlet</b>	<b>Exhaust</b>
	Eight	One	One
<b>Nmbr of camshafts</b>	Two		
<b>Location</b>	Head		
<b>Drive</b>	Chain		
<b>Valve actuation</b>	Buckets		
<b>Spark plugs per cylinder</b>	One		
<b>Identifying marks</b>	Cast on front of head Symbol on front of head: Varies		
<b>Modifications</b>	Refer to <a href="#">Engine</a> . Cylinder head/s may be modified provided such modification is effected only by the removal of metal. Variation in combustion chamber or port design by the addition of material attached by welding, bonding or mechanical fastening systems is not allowed. Welding as required to reclaim damaged cylinder heads is permitted. The insertion or replacement of valve seat inserts is permitted. Cylinder head components not forming part of the cylinder head casting are free.		

## Section 11.3. Exhaust

<b>Exhaust</b>	Refer to <a href="#">Exhaust</a> . The exhaust system should be of a type compatible with the period, and must comply with the requirements of Schedule B, but is otherwise free.
<b>Outlets</b>	Refer to <a href="#">Schedule A and B</a> . Each automobile shall, of necessity, in any speed event or race be fitted with sideways or rearward-facing exhaust outlets. If rearwards, the outlet/s shall be between 100mm and 450mm above the ground and shall not protrude more than 150mm beyond the rearmost portion of the automobile. If directed sideways, the outlet/s must be located rearward of the midpoint of the wheelbase. In any case, they shall not project beyond the maximum width of coachwork or terminate more than 50mm within the plan view of the adjacent coachwork; be configured such that the sound emitted when measured 30m from the track edge does not exceed 95dB(A) unless event regulations set a lower limit;
<b>Noise limit</b>	Refer to <a href="#">Schedule A and B</a> . Each automobile shall, of necessity, in any speed event or race be configured such that the sound emitted when measured 30m from the track edge does not exceed <b>95dB(A)</b> unless event regulations set a lower limit;

## Section 12. Starter Motors

<b>Requirement</b>	<p>Refer <a href="#">Safety</a> – Pages 2 and 3.</p> <p>Vehicles in all historic groups, while competing in competitions specifically limited to such vehicles and mixed category single-car speed competitions, are exempted from normal Motorsport Australia requirements in respect of starter motors.</p> <p>Refer <a href="#">Electrical</a> – Page 1.</p> <p>A self-starter in proper working order fitted to the vehicle is obligatory, and none of its parts may be removed during the event.</p> <p>Refer <a href="#">Equipment – Production Based Groups</a></p> <p>The following components are acceptable on all vehicles within the various groups listed regardless of the original equipment fitted to individual vehicles - Geared starters</p>
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## Section 13. Lubrication system

<b>Method</b>	Wet sump
<b>Oil cooler standard</b>	No
<b>Comment</b>	None
<b>Description</b>	<p>Refer to <a href="#">Lubrication system</a>. – page 5</p> <p>The original lubrication system supplied by the manufacturer must be employed, save that oil pumps may be replaced or modified to enable higher pressure and/or volume, and additional external oil lines to original or approved components may also be employed.</p>
<b>Oil pumps</b>	<p>Refer to <a href="#">Lubrication system</a>– page 5.</p> <p>oil pumps may be replaced or modified to enable higher pressure and/or volume, and additional external oil lines to original or approved components may also be employed. Any replacement oil pump must work on the manufacturer's original principle.</p>
<b>Sumps</b>	<p>Refer to <a href="#">Lubrication system</a>– page 5.</p> <p>Sumps as supplied as original equipment for the model in question may be modified to incorporate baffles and/or increased capacity.</p>
<b>Oil Coolers/Oil filters</b>	<p>Refer to <a href="#">Lubrication system</a>– page 5.</p> <p>Oil coolers and remote oil filters are permitted, but the bodywork must not be altered for the purpose of fitment, nor may they be fitted outside the confines of the standard bodywork.</p>
<b>Dry sump</b>	<p>Refer to <a href="#">Lubrication system</a>– page 5.</p> <p>Dry sump lubrication systems are not permitted, unless originally fitted.</p>
<b>Oil accumulators</b>	<p>Refer to <a href="#">Lubrication system</a>– page 5.</p> <p>Remote pressurised oil accumulators are permitted, conditional on them being used in conjunction with a normal wet-sump oil system, and serving no other purpose. The capacity of the accumulator must not exceed three litres.</p> <p>Refer to <a href="#">Equipment</a>.</p> <p>Accusump oil system permitted.</p> <p>Should the accumulator be mounted in the cockpit, then any container within the cockpit which can hold more than 500mL of hot liquid (other than a series heater core) must be enclosed in a sealed compartment.</p> <p>Refer to <a href="#">Schedule A</a>.</p>
<b>Oil lines</b> <b>Braided</b>	<p>Refer to <a href="#">Equipment</a>.</p> <p>Permitted.</p>

## Section 14. Ignition system

<b>Type</b>	Twin point distributor
<b>Original Make</b>	Bosch
<b>Transistorised ignition</b>	Refer to <a href="#">Electronic Components</a>



	Not permitted.
<b>CDI ignition</b>	Refer to <a href="#">Electronic Components</a> Not permitted.
<b>Electronic ignition (breakerless)</b>	Refer to <a href="#">Electronic Components</a> Permitted.
<b>Electronic coils (square)</b>	Refer to <a href="#">Equipment</a> . Permitted.
<b>Definitions Electronic ignition</b>	Refer to <a href="#">Technical definitions</a> . An ignition system relying on electronic triggering of the spark timing, which does not use mechanical contact points as the spark trigger.
<b>Definitions Transistorised ignition</b>	Refer to <a href="#">Technical definitions</a> . An ignition system using conventional contact breaker points but which has a transistorised spark discharge enhancement, e.g. capacitor discharge ignition.
<b>Description</b>	Refer to <a href="#">Ignition</a> . Ignition must be of the same type, but not necessarily brand, as supplied by the manufacturer. Breaker type distributors must remain so configured, but may otherwise be modified. May be of the same type, but not necessarily brand as supplied by the manufacturer for the make and model concerned.
<b>Breaker points/condenser</b>	Refer to <a href="#">Ignition</a> . Contact breaker points and condenser may be removed and their standard operations performed by electronic components providing the following conditions are adhered to: <ul style="list-style-type: none"> <li>i. All components, save for the coil, shall be an integral part of the distributor.</li> <li>ii. A maximum of two wires shall connect the low tension side of the distributor to the coil. These wires shall be visibly continuous and not contain any supplementary connection to any other component. Permitted is the fitment of an uninsulated earthing conductor between distributor body and cylinder block.</li> <li>iii. Ignition advance shall be restricted to mechanical actuation within the distributor.</li> </ul>

## Section 15. Cooling system

<b>Method</b>	Liquid
<b>Radiator</b>	Refer to <a href="#">Cooling</a> . – page 5 The radiator may be replaced but must retain its original location, form and function. The support panel opening may not be modified. The material from which the radiator may be manufactured is free.
<b>Braided water lines</b>	Refer <a href="#">Equipment</a> . Not permitted
<b>Electric Fans</b>	Refer <a href="#">Electric Fans</a> . Electric fans may be added, provided that no part of the fan assembly is visible from the outside of the vehicle.

## Section 16. Fuel

<b>Definitions Fuel</b>	Refer <a href="#">Schedule G. – Page 1</a> Each Automobile must use only fuel compliant with <a href="#">Schedule G</a> . Refer <a href="#">General</a> – Page 1 All fuel used in competition must comply with the prescriptions of Manual Technical Appendix Schedule– Fuel. G. All fuel must be used without additives other than those permitted in Schedule G.
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	<p>Other than for pump fuel, the mixing of fuels from different oil companies, or of different grades and/or types of fuel from the same oil company is forbidden.</p> <p>Refer <a href="#">Fuel</a> – Pages 4 and 5.</p> <p>Only fuel as defined by Motorsport Australia must be used with reference to Motorsport Australia Manual <a href="#">Schedule G</a> - Fuel, or as otherwise defined within these regulations.</p> <p>All fuel used in competition must comply with the prescriptions of Motorsport Australia Manual, <a href="#">Schedule G</a> – Fuel unless otherwise defined within these regulations.</p> <p>Other than for pump fuel, the mixing of fuels from different oil companies, or of different grades and/or types of fuel from the same oil company is forbidden. 5th Category vehicles may be subject to fuel testing as outlined in <a href="#">Schedule G</a> but need not be equipped with specific systems to enable the drawing of fuel samples. Any sampling shall be undertaken with due regard to safety.</p>														
<p><b>Definition</b> <b>Fuel additives</b></p>	<p>Refer <a href="#">General</a> – Page 1</p> <p>(iv) Fuel Additive</p> <p>A Fuel Additive is any additive which is commercially available in Australia and is distributed for the purpose of being added to a fuel to provide additional lubrication to the fuel or to effect the specification of the fuel (such as the Research Octane Number [RON]).Refer <a href="#">Fuel</a> – Page 5.</p> <p>All fuel must be used without additives other than those permitted in <a href="#">Schedule G</a> or otherwise as defined within these regulations.</p>														
<p><b>Fuel</b> <b>Leaded</b></p>	<p>Refer <a href="#">General</a> – Page 1</p> <p>Use only fuel compliant with <a href="#">Schedule G</a>.</p> <p>Refer <a href="#">Fuel</a> – Pages 4 and 5.</p> <p>Only fuel as defined by Motorsport Australia must be used with reference to the Manual Technical Appendix <a href="#">Schedule G</a> - Fuel, or as otherwise defined within these regulations.</p> <p>Only those additives as defined within these regulations are permitted or each Group may use additives as permitted within the Manual Technical Appendix <a href="#">Schedule G</a> – Fuel</p>														
<p><b>Fuel</b> <b>Permitted fuel</b></p>	<table border="1" data-bbox="614 1265 1343 1668"> <thead> <tr> <th>GROUP</th> <th>LEADED RACING FUEL<sup>1</sup></th> <th>UNLEADED RACING FUEL</th> <th>ETHANOL BLENDED FUEL</th> <th>PUMP FUEL</th> <th>ADDITIVES<sup>2</sup></th> <th>As per Log Book or COD</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> <td></td> </tr> </tbody> </table> <p>Refer <a href="#">Permitted Fuel and Additives</a> – Pages 4 and 5</p> <p><b>Unleaded Racing Fuel</b></p> <p>Refer - <a href="#">Schedule G – Page 2</a>.</p> <p>Unleaded racing fuel is defined as an unleaded petrol produced by an oil company in compliance with the specifications detailed in the Code. Such Unleaded Racing Fuel supplied from a drum is permissible.</p> <p>Refer - <a href="#">Fuel – Pages 5 and 6</a></p> <p>An Unleaded Racing Fuel with a maximum Ethanol content of 30% which is commercially available in Australia and distributed by a Fuel Supplier and which complies with the Fuel Standards</p>	GROUP	LEADED RACING FUEL <sup>1</sup>	UNLEADED RACING FUEL	ETHANOL BLENDED FUEL	PUMP FUEL	ADDITIVES <sup>2</sup>	As per Log Book or COD	N	*	*	*	*	*	
GROUP	LEADED RACING FUEL <sup>1</sup>	UNLEADED RACING FUEL	ETHANOL BLENDED FUEL	PUMP FUEL	ADDITIVES <sup>2</sup>	As per Log Book or COD									
N	*	*	*	*	*										

	<p>Determinations made under the Australian Fuel Quality Standards Act.</p> <p><b><u>Pump Fuel</u></b> A Commercial Fuel, with a maximum ethanol content of 10% - In accordance with Motorsport Australia Manual, Schedule G – Fuel.</p> <p><b><u>Ethanol Blended Fuel</u></b> Ethanol Blended Fuel is defined as only containing the following constituents:</p> <p>(a) Anhydrous fuel grade ethanol (between 70% and 85% ± 5% v/v)</p> <p>(b) Unleaded petrol (15% and 30% ± 5% v/v)</p> <p>(c) Corrosion inhibitor (optional)</p> <p>(d) Colouring dye (optional)</p> <p>(e) Other constituents (0.2% max v/v)</p>
<b>Fuel Permitted additives</b>	<p>Refer <a href="#">Fuel</a> – Page 3.</p> <p>Only these <a href="#">additives</a> are permitted:</p> <p>(i) Valvemaster®,</p> <p>(ii) Redline Lead Substitute®,</p> <p>(iii) Penrite Valve Shield®,</p> <p>(iv) PM 800 Fuel System Conditioner®,</p> <p>(v) Elf Millesim®.</p>

## Section 16.1. Fuel system

<b>Tank location</b>	Rear
<b>Original Capacity</b>	45.5 litres
<b>Original Fuel pump type and location</b>	Mechanical
<b>Make</b>	Alfa Romeo
<b>Fuel injection</b>	<p>Also refer to <a href="#">Induction</a>.</p> <p>Fuel injection is not permitted, unless fitted as original equipment to the make, model and year concerned. In such circumstances only the type, make and model of fuel injection equipment as originally fitted may be used.</p>
<b>Filler caps</b>	<p>Refer <a href="#">Fuel Tanks and Fuel systems</a> – page 6.</p> <p>All quick-release (Monza-type) fuel filler caps protruding outside the silhouette of the bodywork must be fitted with a secondary device to prevent accidental opening.</p>
<b>Safety valve</b>	<p>Refer <a href="#">Fuel Tanks and Fuel systems</a> – page 6.</p> <p>It is recommended that all cars are fitted with a one-way safety valve in the filler neck as close as possible to the fuel tank.</p>
<b>Exemption Fuel Cut-off switch</b>	<p>Refer to <a href="#">Safety</a> - page 2.</p> <p>Vehicles in all historic groups, while competing in competitions specifically limited to such vehicles and mixed category single-car speed competitions, are exempted from normal Motorsport Australia requirements in respect of fuel cut-off switches, other than an isolating device which is clearly marked.</p>

## Section 16.2. Fuel Tanks

<b>Fuel Tank</b>	<p>Also refer to <a href="#">Fuel Tank</a></p> <p>Any container holding fuel likely to flow by any means whatsoever towards the main tank or the engine.</p>
<b>Fuel Tank</b>	<p>Refer to <a href="#">Fuel Tank</a>.</p> <p>The fitment of a foam-filled fuel tank, or a fuel tank of a safety type approved by the FIA to FT3 specifications, is highly recommended. It should be installed either</p> <p>(i) in the same location as the original fuel tank, whereupon the original tank may be removed; or</p>

	(ii) (ii) as near as practicable to the retained original fuel tank. In this instance the original fuel tank must be fully drained of any liquid, cleaned and rendered totally fuel vapour free, any drain plug must be removed, and the tank must be adequately vented. The filler neck must be isolated to prevent accidental re-filling.
<b>Venting</b>	Refer <a href="#">Fuel Tanks and Fuel systems</a> – page 6. All fuel tanks must be vented externally to the bodywork. Refer also <a href="#">Schedule A</a> – Page 1 Each automobile shall, of necessity, in any competition have each fuel tank vented externally to the bodywork
<b>Exemption</b>	Refer to <a href="#">Safety</a> - page 2. Vehicles in all historic groups, while competing in competitions specifically limited to such vehicles and mixed category single-car speed competitions, are exempted from normal Motorsport Australia requirements in respect of safety fuel tanks.

### Section 16.3. Fuel pump and lines

<b>Fuel Pump Solid state</b>	Refer to <a href="#">Electronic Components</a> Permitted.
<b>Original Fuel pump type and location</b>	Mechanical
<b>Fuel Pump Electric</b>	Refer to <a href="#">Induction</a> Mechanical fuel pumps may be replaced by electric fuel pumps.
<b>Fuel lines Braided</b>	Refer to <a href="#">Equipment</a> Permitted.

### Section 16.4. Bulkhead

<b>Bulkhead</b>	Refer to <a href="#">Schedule A and B.</a> must be fitted with a bulkhead constructed from a flame - and liquid proof material. If the material is constructed from polycarbonate it shall be a minimum of 6mm thick. This bulkhead must effectively seal the cockpit from the fuel tank and re-fuelling system.
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### Section 17. Carburettor

<b>Original Carburettor make TI1600</b>	Solex
<b>Model TI 1600</b>	PAIA 7
<b>Carburettor number</b>	One
<b>Size</b>	33 mm
<b>Original Carburettor make TI Super</b>	Weber
<b>Model TI Super</b>	DCOE
<b>Carburettor number</b>	Two
<b>Size</b>	45 mm
<b>Carburettor Type</b>	Refer to <a href="#">Induction.</a> Carburettors available during the period and later models of carburettors which were available in the period are acceptable, provided that the outward appearance is the same. Refer <a href="#">SU Carburettors.</a> Carburettors of a make, model and/or appearance not available in the period are not permitted.
<b>Carburettor</b>	Refer to <a href="#">Induction.</a>

<b>Number and type</b>	Multiple carburettors may be fitted in the ratio of not more than one choke per cylinder. Throttle bore sizes are free. Internal modifications of carburettors are permitted. Carburettors of a make, model and/or appearance not available in the period are not permitted. Carburettors available during the period and later models of carburettors which were available in the period are acceptable, provided that the outward appearance is the same. Multiple carburettors may be fitted in the ratio of not more than one choke per cylinder. Throttle bore sizes are free. Internal modifications of carburettors are permitted.
<b>Carburettor Throttle bore sizes</b>	Refer to <a href="#">Induction</a> . Throttle bore sizes are free.
<b>Carburettor Internal modifications</b>	Refer to <a href="#">Induction</a> . Internal modifications of carburettors are permitted.

### Section 17.1. Throttle linkage

<b>Throttle Linkage</b>	Refer to <a href="#">Schedule A and B</a> . Each automobile shall, of necessity, in any speed event or race be fitted with a return mechanism which in the event of any throttle linkage or throttle system failure will close each throttle.
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### Section 18. Inlet manifold

<b>Inlet manifold</b>	Also refer to <a href="#">Induction</a> . Inlet manifolds are free except that they must be of a type compatible with the period.
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### Section 19. Transmission

#### Section 19.1. Clutch

<b>Make</b>	Various
<b>Type</b>	Diaphragm
<b>Diameter</b>	200 mm
<b>Nmbr of plates</b>	One
<b>Actuation</b>	Mechanical Refer <a href="#">Transmission</a> – pages 5 and 13 The clutch is free. The clutch and its method of actuation are free.
<b>Measuring tolerances</b>	Refer <a href="#">Measuring tolerances</a> – page 4 All machining (except bore and stroke) including fan, crankshaft bearings, connecting rod bearings, valves, ports, carburettor, venturi, manifolds and clutch $\pm 0.2\%$ Weight of flywheel, clutch, crankshaft, connecting rods and pistons: +7% - 0.3%

#### Section 19.2. Gearbox

<b>Type</b>	5-speed synchromesh
<b>Make</b>	Alfa Romeo
<b>Nmbr of forward speeds</b>	Five
<b>Gearbox location</b>	Behind engine
<b>Gearchange type and location</b>	H pattern floor mounted
<b>Case material</b>	Alloy
<b>Identifying marks</b>	N/A
<b>Comments</b>	None
<b>Transmission Gear ratios</b>	Refer <a href="#">Transmission</a> – page 5 The original type of gearbox as supplied by the manufacturer for the make and model concerned, assembled and operating as

	<p>originally supplied by the manufacturer, shall be retained. The number of forward and reverse gear ratios may not be changed; however, the use of alternate gear ratios is permitted. The gear lever may be modified but the original shift pattern must be retained.</p> <p>Refer <a href="#">Final Drive</a> – page 5</p> <p>The original type of final drive assembly, including the housing supplied by the manufacturer for the make, model and year concerned shall be employed. The final drive assembly may be subject to machining operations provided always that its origin is able to be established. The overall width of the differential assembly may not be altered from the original specification. The use of alternate ratios is permitted.</p>
	<p>Refer <a href="#">Transmission</a> – page 5</p> <p>The original type of gearbox as supplied by the manufacturer for the make and model concerned, assembled and operating as originally supplied by the manufacturer, shall be retained. The number of forward and reverse gear ratios may not be changed; however the use of alternate gear ratios is permitted. The gear lever may be modified but the original shift pattern must be retained.</p>

### Section 19.3. Final drive

<b>Make</b>	Alfa Romeo
<b>Model</b>	Helical gears
<b>Type</b>	<p>Hypoid</p> <p>Refer <a href="#">Final Drive</a> – page 5</p> <p>The original type of final drive assembly, including the housing supplied by the manufacturer for the make, model and year concerned shall be employed.</p>
<b>Wheel drive method</b>	Rear
<b>Ratios</b>	Various
<b>Machining</b>	<p>Refer <a href="#">Final Drive</a> – page 5</p> <p>The final drive assembly may be subject to machining operations provided always that its origin is able to be established.</p>

### Section 19.4. Differential

<b>Differential type</b>	<p>Refer <a href="#">Final Drive</a> – page 5</p> <p>The original type of final drive assembly, including the housing supplied by the manufacturer for the make, model and year concerned shall be employed.</p> <p>Refer <a href="#">Final Drive</a> – page 13</p> <p>Differentials may be modified internally to incorporate slip limiting or locking devices.</p>
<b>Ratios</b>	<p>Refer <a href="#">Final Drive</a> – page 5</p> <p>The use of alternate ratios is permitted.</p>
<b>Make</b>	Alfa Romeo
<b>Model</b>	Helical gears
<b>Floating hubs</b>	Modifications to incorporate floating hubs are permitted.
<b>Machining</b>	<p>Refer <a href="#">Final Drive</a> – page 5</p> <p>The final drive assembly may be subject to machining operations provided always that its origin is able to be established.</p>
<b>Width</b>	<p>Refer <a href="#">Final Drive</a> – page 5</p> <p>The overall width of the differential assembly may not be altered from the original specification.</p>

### Section 19.5. Transmission shafts (exposed)

<b>Number</b>	One
---------------	-----

<b>Location</b>	Gearbox to final drive
<b>Description</b>	Tubular shaft with 2 universal joints with front rubber coupling
<b>Fixed casing</b>	Refer <a href="#">Schedule A</a> – page 1 Each automobile must, of necessity, in any competition, have any propeller shaft and universal joints, if passing through the cockpit, fitted in a fixed casing.
<b>Protection</b>	Refer <a href="#">Schedule A</a> – page 2 Each automobile must, of necessity, in any race event, be fitted with a device or devices that shall protect any longitudinal propeller shaft from striking the ground in the event of a component failure.
<b>Replacement</b>	Refer <a href="#">Final Drive</a> – page 5 Tailshafts and yokes: may be replaced provided they are of a steel construction and must maintain the original configuration.

## Section 20. Electrical System

<b>Voltage</b>	12
<b>Generator or Alternator</b>	Generator
<b>Definition</b>	Refer <a href="#">Electrical</a> – Page 6. All electrical equipment must be of period style and specification, save that a dynamo/generator may be replaced by an alternator. The component parts of a complete electric system, including generator, accumulator, warning. The electrical system, including lighting and warning apparatus, must be in working order at the start of the competition.
<b>Original Battery location</b>	LHS of engine bay
<b>Battery Location options</b>	Refer <a href="#">Electrical</a> page 6. The battery may be relocated. If the battery is relocated, the battery must be either of dry cell construction or be fitted within a suitable container which will prevent spillage of battery acid outside the container. In all cases the battery must be securely attached to the vehicle and the terminals covered to prevent short circuits.
<b>Battery Location identification</b>	Refer <a href="#">Schedule A</a> – page 2 Display a blue triangle of sides 150mm indicating the location of the battery. A battery fitted in the cockpit shall have an additional blue triangle not less than 60mm sides fitted on the cover of the battery or immediately adjacent to the battery if uncovered;
<b>Isolation switches</b>	Refer <a href="#">Safety</a> page 3. All vehicles must be equipped with a Battery Isolation (Master) Switch which effectively isolates all electrical circuits from the battery and stops the engine. It should be capable of being operated by the seated driver. It is recommended that there be a second switch, or a remote means of operating the main switch, which can be operated from outside the vehicle. This should be positioned in the vicinity of the base of the A pillar on the driver's side. This external switch or remote activation must be clearly marked by a symbol showing a red spark in a white edged blue triangle. Also refer to <a href="#">Fuel Tanks and Fuel Systems</a> – page 6. Fuel systems (electrical or mechanical) must have an isolating device which is clearly marked.
<b>Spade terminals</b>	Refer <a href="#">Equipment</a> . Electrical spade terminals - Permitted
<b>Fuse Box</b>	Refer <a href="#">General</a> – Page 2. A fuse box may be relocated to enable a safety cage structure to be fitted.

## Section 21. Paintwork and Signage

<b>Requirements</b>	Refer <a href="#">Paintwork and Signage</a> – Page 2.
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The original style of paintwork and livery is encouraged; however, all advertising on/in cars, drivers and teams must comply with current Australian legal requirements and any requisite national restrictions. Any sign or advertisement which is deemed to be offensive by the Stewards will be prohibited.  
Any sign or advertisement which is in breach of any Government Legislation will be prohibited.

**Tobacco advertising signage**

Refer [Paintwork and Signage](#) – Page 2.

Historic motorsport Automobiles must comply with the Tobacco Advertising Prohibition Act 1992 in relation to the display, publication or promotion of historic motorsport Automobile liveries.

Allowed **Original** historic automobile that actively competed in motorsports with tobacco sponsorship livery in races before 24 December 1992 and Automobile historic log book issued before 24 December 1992. Such signage will only be acceptable only on privately owned Automobiles, and where the owner certifies that no direct or indirect benefit is received from any party in consideration for the carriage of such signage. This certification must be provided prior to the issue of any historic logbook evidencing the display of such signage.

**Original** historic automobile that actively competed in motorsports with tobacco sponsorship livery in races before 24 December 1992 and Automobile historic log book issued on or after 24 December 1992. Such signage will only be acceptable only on privately owned Automobiles, and where the owner certifies that no direct or indirect benefit is received from any party in consideration for the carriage of such signage. This certification must be provided prior to the issue of any historic logbook evidencing the display of such signage.

**Replica** historic automobile (an Automobile of the same make and model to an original historic race automobile, designed to replicate an original historic Automobile, including tobacco sponsorship livery) and Tobacco advertising existed on the Automobile before 24 December 1992 and Automobile historic log book issued before 24 December 1992. Such signage will only be acceptable only on privately owned Automobiles, and where the owner certifies that no direct or indirect benefit is received from any party in consideration for the carriage of such signage. This certification must be provided prior to the issue of any historic logbook evidencing the display of such signage.

The paintwork and colour scheme may resemble the original Automobile.

**Tribute** automobile (a different model or series to an original historic race Automobile, designed to honour or evoke memories of the original historic Automobile, including the application of the original Automobile's tobacco sponsorship livery and Tobacco advertising existed on the Automobile before 24 December 1992 and Automobile historic log book issued before 24 December 1992. Such signage will only be acceptable only on privately owned Automobiles, and where the owner certifies that no direct or indirect benefit is received from any party in consideration for the carriage of such signage. This certification must be provided prior



	to the issue of any historic logbook evidencing the display of such signage.
<b>Tobacco advertising signage Logos that resemble the original logo</b>	Logos that resemble the original logo with the intension of subliminal messaging are not permitted.
<b>Tobacco advertising signage Disputes</b>	Where there is any dispute as to the eligibility of an Automobile for tobacco advertising signage, the onus of evidence and the application for an exemption are the responsibility of the Automobile's owner. Motorsport Australia will grant an exemption only where such documentation is provided.

## Section 22. Identification/Markings

<b>Competition Numbers</b>	<p>Refer <a href="#">Mandatory Identification</a> – page 1. Competition numbers must be displayed in accordance with this Schedule and be clearly visible to the satisfaction of the Clerk of the Course.</p> <p>Refer <a href="#">Advertising/Signage</a> – pages 6 and 7. The location and size of competition numbers shall be an upper case “N” directly followed by a lower case “a”, “b” or “c” (as appropriate) being black or white contrasting in colour to that of the bodywork, 100mm and 80mm in height respectively in typeset Helvetica Bold Condensed immediately following the vehicle's racing number at the bottom right hand corner, no further than 100mm from the border of the background.</p> <p>Refer <a href="#">Competition Numbers</a> – Page 2 Competition numbers carried by 5th Category vehicles must comply with the requirements of <a href="#">Schedule K</a>, article 2 (refer “General Requirements for Cars and Drivers”) except as follows: (b) All 5th Category vehicles which have a disc or rectangular background to the competition number may carry either black numbers on a white background or white numbers on a black background.</p>
<b>Competition Numbers Windscreen numbers</b>	<p>Refer <a href="#">Competition Numbers</a> – Page 3 Group N vehicles may use a windscreen competition number. The number must be white, bold sans serif condensed (Helvetica Bold Condensed, Zurich Bold Condensed or Arial Narrow Bold) and 100mm high. And should be located no more than 120mm from the top of the windscreen to the top of the number on the passenger side of the front windscreen.</p>
<b>Competition Numbers Exemptions</b>	<p>Refer <a href="#">Competition Numbers</a> – Page 3 Applications for exemption from the requirements as to background specified in <a href="#">Schedule K</a> (refer “General Requirements for Cars and Drivers”) and/or for the carriage of numbers differing in typestyle, size, colour or placement to the normal requirements may be made in individual cases where the specified vehicle competed in such a visual form during the relevant group period. Approvals to such applications will be evidenced by inclusion in the logbook and Certificate of Description of photographs showing the approved style of competition number on the car.</p>
<b>Driver name</b>	<p>Refer <a href="#">Paintwork and Signage</a> – Page 3. The name of the driver may be shown on the Automobile, appearing once on either side in a position below the window line, in a size not larger than 40mm by 300mm.</p>
<b>Competitor name</b>	<p>Refer <a href="#">Advertising/Signage</a> – page 6. Permitted - in neat, unobtrusive lettering – of the name of the competitor and/or the driver and/ or the State of their residence on the scuttle or the side of the vehicle. The total area of all such signs shall not exceed 75mm in height and 600mm in length on each side of the vehicle.</p>

<b>Territory of origin</b>	Refer <a href="#">Paintwork and Signage</a> – Page 3. Refer <a href="#">Advertising/Signage</a> – page 6. The territory of origin of the driver may be shown on the vehicle. Each sign must be not larger than 100mm by 150mm and must be placed below the window line. Only two such signs are permitted.
<b>Club badges</b>	Refer <a href="#">Paintwork and Signage</a> – Page 3. Refer <a href="#">Advertising/Signage</a> – page 6. A Club badge of an acceptable motoring club may appear on the vehicle. Each badge must be not larger than 150mm by 100mm and must be placed below the window line. Only two such badges are permitted, one on each side.
<b>Tow Point</b>	Refer <a href="#">Schedule B</a> – Page 2. Where a tow point is obscured, each tow point shall be marked with the word “TOW” of a contrasting colour marking the location of each tow point.
<b>Other advertising material</b>	Refer <a href="#">Paintwork and Signage</a> – Page 3. No other advertising material or sign is permitted unless evident in the applicable group period (see relevant Group Articles) or, upon application by an Organiser or an individual club or competitor group subject to the prior approval of any affected organiser/s. Specific approval by the Australian Historic Motor Sport Committee is required to allow the display of event sponsor signage. Applications should be submitted well in advance of the event/s in question (a period of at least six weeks is envisaged) and be supported by full details of the event/s, the specific signage proposed and the benefits to be derived by competitors and/or organisers. If approved, the positioning of such signage on the various Groups of historic vehicles will be determined by the Committee, having regard to vehicle type and historic precedent. Dimensions of any such signage must be in accordance with the restrictions set out in FIA <a href="#">Appendix K</a> .

## Section 23. Roll cage/Safety cage

<b>Requirement</b>	Refer <a href="#">Safety Cage Structure</a> – page 2. The fitment of a safety cage structure (refer <a href="#">Schedule I</a> – “General Requirements for Cars and Drivers”) is compulsory.
<b>Requirement</b> <b>Original Period fitted</b> <b>Type 2</b> <b>Type 3</b>	Refer <a href="#">Safety Cage Structure</a> – page 2. The safety cage structure shall comply with <a href="#">Schedule J</a> requirements (refer “General Requirements for Cars and Drivers”) in all aspects save for the following: <ul style="list-style-type: none"> <li>• a <b>Type 2 (half cage)</b> is a minimum requirement for <b>Group N Touring cars</b> and <div data-bbox="938 1512 1141 1742" data-label="Image"> <p style="text-align: center; color: red;">Type 2</p> </div> </li> <li>• it is strongly recommended that a Type 3 (full cage) should be installed in a closed vehicle.</li> </ul>



Type 3



Type 3

In addition to the mounting points depicted in the Type 2 and Type 3 illustrations in [Schedule J](#) (refer “General Requirements for Cars and Drivers”), it is permitted to attach the safety cage structure to other points of the body subject to those additional attachment points being to either the front hoop or the main hoop of the safety cage structure. Such additional attachments may be by bolting or welding.

For the approval process for a safety cage structure not in compliance with Schedule J please refer to [Schedule J](#) section 6 – “Certification by Motorsport Australia”. – page 9

**Requirement  
Not Original Period fitted**

Refer [Safety Cage Structure](#) – page 2.

For Groups Na, Nb and Nc not using the original period fitted and installed safety cage the lower mounting plates of the safety cage structure must be contained entirely within the cockpit (i.e., the structural inner volume which accommodates the driver and the passengers) and no component may pass through any part of the body work nor be installed in any other compartment of the vehicle. The front legs of the roll cage may pass through the dashboard adjacent to the A-pillar. The minimum amount of material may be removed to enable fitment. The front leg is not to be attached to the dashboard except where prior approval has been granted by Motorsport Australia. No associated components contributing to the strength of the safety cage structure may be situated outside the cockpit. In the case of a “hatchback” type of body no component of a safety cage structure may be located rearward of the upper pick-up point of the rear shock absorbers.

**Side anti-intrusion bars**

Refer [Safety Cage Structure](#) – page 2.

Side anti-intrusion bars or other additional braces outlined in Schedule J (refer “General Requirements for Cars and Drivers”) may be fitted to the safety cage structure provided that none of these additional components passes through the bodywork.

**Rear seats**

Refer [Safety Requirements](#) – page 2.

Rear seats may be locally modified to permit the fitment of a safety cage structure.

**Exemptions**

Refer [Safety Requirements](#) – page 2.

Important note: Group N is sometimes combined in races with non-historic categories, and in such cases, the dispensations granted in relation to safety for historic racing no longer apply. Cars must be fitted with the safety items applying to the relevant category and level of the event. Potentially this could include, but is not necessarily limited to, items such as “full” roll cages and window nets.

Refer [Roll Bars](#) – page 2.

Effective roll bars must be fitted to all competing vehicles. Any exemption from the requirement to fit roll bars must be sought from and approved by Motorsport Australia. Refer [Safety](#) – page 2.

(a) Automobiles in all historic (Category 5) groups:

- i) while competing in competitions specifically limited to Category 5 vehicles; or
- ii) mixed category and single-car speed competitions

are exempted from normal Motorsport Australia requirements in respect of rollover protection structures bars (subject to the limitations of 3.1 [Safety Cages/Roll Bars](#)) – Page 3.

## Section 24. Safety Harness

### Requirements





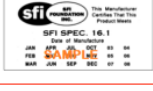







Refer [Safety Harnesses](#) – page 18.

A safety harness must be fitted to the vehicle in accordance with [Schedule I](#) (refer "General Requirements for Cars and Drivers"). Refer [Schedule I](#) – Page 1.

(a) A safety harness (including a seat belt) must be compliant with a standard as specified below and be fitted and worn in accordance with the manufacturer's directions, with Tables I-1 and I-2 of this Schedule and any additional requirement imposed by specific category, group and/or supplementary regulations.

(b) Each safety harness must comply at least with one of the Standards as specified in Table I-1 below.

TABLE I-1

	Configuration	Acceptable Standards	Identification
<b>A</b>	6-Point Harness 	FIA 8853-2016 <sup>3</sup> FIA Hologram compulsory FIA 8853/98 <sup>1</sup> FIA Hologram compulsory for each harness manufactured after 01/01/2013	 
	5-Point Harness 	SFI 16.1 <sup>2</sup>	
<b>B</b>	4-Point Harness 	Includes Level A FIA 8854/98 <sup>1</sup> AS 2596 ECE R16	  
	3-Point Harness 		
<b>C</b>	Lap Sash Belt 	AS 2596 ECE R16 AS E35	
<b>D</b>	Lap Belt 	AS 2596 ECE R16 AS E35	

**NOTE:**

<sup>1</sup> "Not valid after XXXX" shown on each strap as detailed below:

For *International Competition*, safety harnesses must not be used after 31 December of the year stated (XXXX).

For all other events, safety harnesses must not be used after 31 December, five years after the year stated (XXXX).

The extension of the safety harness validity detailed above for non – *International Competition* is subject to the following conditions:

Safety harnesses must be inspected during the normal scrutiny process;

Each *Competitor* must inspect and replace any damaged or worn safety harness before any *Competition* as required.

<sup>2</sup> SFI Harness to be returned to original manufacturer for re-webbing within two years of the date of manufacture shown on SFI label or be replaced. This requirement is imposed by the SFI Foundation (Inc).

<sup>3</sup> FIA 8853-2016 only in accordance with FIA Presentation Forms:

<https://www.fia.com/presentation-forms-harnesses-according-fia-standard-8853-2016>.

Extension of the safety harness validity is not permitted for a FIA 8853/2016 standard harness.

Event Type	Event Permit Level	Type	Notes
Observed Section Trial	All	D	
Motorkhana	All	D	Type C, D minimum for each Specials
Khanacross	All	C	Type B minimum for each Specials
Speed	All	C	Registered closed <i>Automobile</i>
		B	Other <i>Automobile</i>
		A	Where FHR is required – refer Schedule D
Circuit Race <sup>4</sup>	All	A	
Rally (includes Cross Country)	All	A	
Rallysprint	S1	C	
	S2	A	
Other Road Events	Touring / Navigation Assemblies	C, D	Must comply with civil regulations or otherwise as required for any other sub event/s or special test/s.
	Touring Road	C, D	Must comply with civil regulations or otherwise as required for any other sub event/s or special test/s.
Off Road	All	A	

**NOTE:**

<sup>4</sup> Except 5<sup>th</sup> Category Historic: For *Automobiles* of the 5<sup>th</sup> Category Historic classifications whilst competing in events exclusively for the 5<sup>th</sup> Category, each safety harness must be of a type and configuration as specified in the relevant 5<sup>th</sup> Category Historic group technical regulations.

- (c) A safety harness of a higher level than specified is permitted and encouraged.
- (d) Each safety harness with the words “For FHR use only” which appears on each shoulder strap must be worn only in conjunction with a Frontal Head Restraint (FHR) device.
- (e) The fitment of an elastic cord and or any retention device not homologated by the FIA, which is bonded or sewn to a safety harness shoulder strap is not permitted.
- (f) A safety harness damaged in any way, including in a collision, shall be subject to inspection by a scrutineer. If appropriate, the automobile’s log book shall be endorsed with a requirement that the belt/harness be replaced.
- (g) The lap and crotch straps must not pass over the sides of the seat but through the seat, in order to wrap and hold the pelvic region over the greatest possible surface.  
The lap straps must fit tightly in the bend between the pelvic crest and the upper thigh. Under no conditions must they be worn over the region of the abdomen.  
Care must be taken that the straps cannot be damaged through chafing against sharp edges.

Some safety harnesses may not comply with the law. Where the automobile is to be driven on a public road, it is the competitor’s responsibility to ensure that it complies with the law.

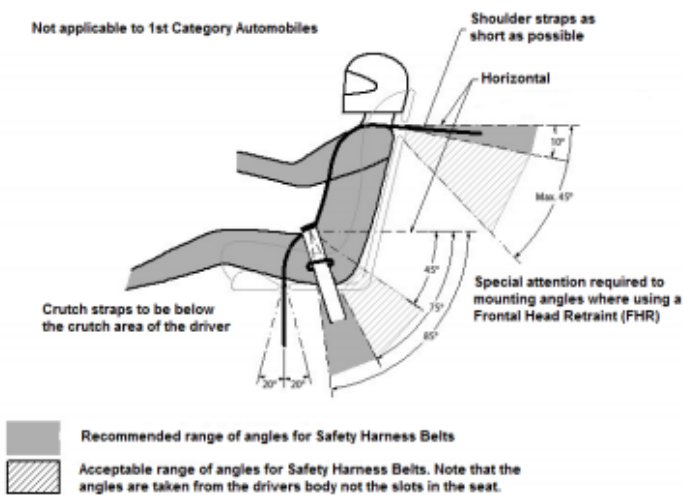
## Section 25. Safety Harness mountings

### Safety Harness Mountings

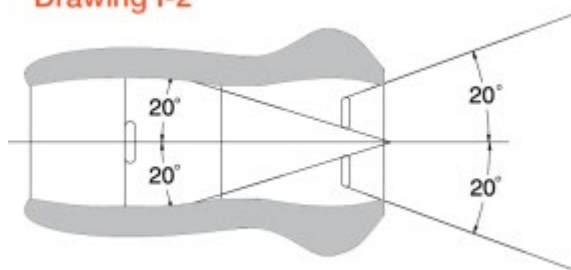
Refer [Safety Harnesses](#) – page 1.

- (a) A safety harness must be securely mounted on at least two points (Type D), three points (Types B and C) or five/six points (Type A) in compliance with the prescriptions of Drawings I-1, I-2 and I-3.

### Drawing I-1

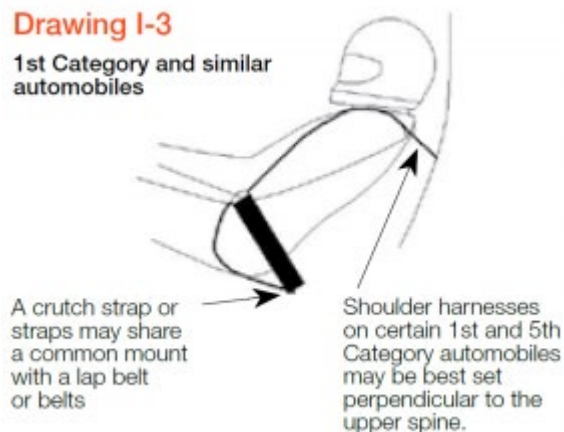


### Drawing I-2



### Drawing I-3

1st Category and similar automobiles



If the two shoulder straps (Types B and C) join prior to a common mounting point then that junction shall be at least 150mm behind the wearer's neck. Under no circumstances shall a safety harness mounting bolt be used to affix a safety cage to the bodyshell.

(b) A safety harness shall be installed in accordance with the manufacturer's instructions with consideration to the requirements when using a Frontal Head Restraint and application of the following:

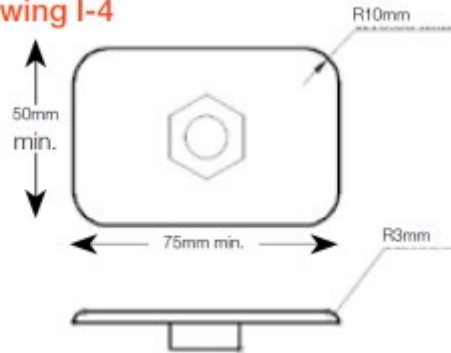
- (i) The shoulder straps must be directed to the rear and installed in such a way that they do not make an angle greater than 45° to the horizontal from the occupant's shoulder where a frontal head restraint is not used. It is highly recommended that this angle should not exceed 10° (refer drawing I-1).
- (ii) The maximum angles in relation to the centre-line of the seat are 20° divergent or convergent (refer drawing I-2). The shoulder

straps may be installed crosswise symmetrically about the centre-line of the front seat mounting points for a safety harness.

(c) A safety harness shall be mounted using the following:

- (i) On a production car, any unmodified seat belt mounting point may be used;
- (ii) Where a safety harness is affixed to an un-reinforced section of the body shell, each attachment point shall be reinforced by the use of a plate not less than 75mm x 50mm x 3mm thick (refer drawing I-4) or otherwise no less than an area of 40cm<sup>2</sup> x 3mm thick;

**Drawing I-4**



(iii) Except for a crutch strap mounted in accordance with (d) any bolt used shall be a minimum of 10mm grade 8.8, or an eye bolt to the recognised thread diameter of 7/16" or 11mm or using fasteners as homologated by the FIA and in compliance with the FIA requirements;

(iv) Shoulder straps may be fixed to the safety cage or to a reinforcement bar by means of a loop, and/or be fixed to a transverse reinforcement compliant with [Schedule J](#) and the following:

- (A) When looped around a transverse bar adjustment mounting buckles are to be placed as close as possible to the bar to reduce the amount of slip of the shoulder strap mountings.
- (B) It is permitted to retain a shoulder strap/s into position to maintain FHR adjustment using material such as safety cage padding.

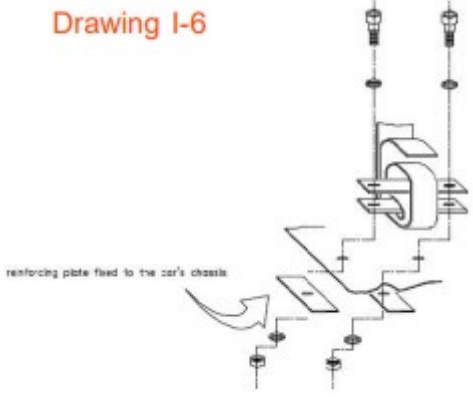
(d) Only a crutch strap or straps may be mounted in accordance with drawing I-6 where the following shall apply:

- (i) Bar/s shall not bend under a strap load of at least 14.7kN
- (ii) All edges shall be appropriately rounded (>1.5mm radius)
- (iii) The bars shall directly clamp on each other firmly clamping the webbing
- (iv) Each attachment point shall be reinforced by the use of a plate in accordance with drawing I4 or a single plate in accordance with drawing I-5

**Drawing I-5**



(v) The belt is correctly routed in accordance with drawing I-6



**Section 26. Safety Harness mountings (with Frontal Head Restraint)**

<p><b>Use with Frontal Head Restraint (FHR)</b></p>	<p>Refer <a href="#">Frontal Head Restraints</a> – Page 5 Mandatory for Group N. Refer <a href="#">Schedule I</a> – Page 1. (d) Each safety harness with the words “For FHR use only” which appears on each shoulder strap shall be worn only in conjunction with a FHR device. Any international event listed on the FIA International Calendar will be subject to the safety harness standards detailed in the FIA ISC. Important note:</p>
<p><b>Fitment of Safety Harness Mountings for Frontal Head Restraint (FHR)</b></p>	<p>Refer <a href="#">Schedule I</a> – Page 4. For automobiles of the 5th Category whilst competing in events exclusively for the 5th Category, each safety harness shall be of a type and configuration as specified in the specific group technical regulations. Refer <a href="#">Safety Harnesses</a> – page 2.</p> <p><b>Drawing I-9</b> Recommended harness placement with use with FHR</p> <p>Each safety harness must be compliant with FIA or SFI standards and it is strongly recommended to use only a 6 point harness homologated to FIA standard 8853/98 or FIA standard 8853-2016. A safety harness with either a 75mm or a 50mm wide shoulder strap may be used with FHR. The following shall apply:</p> <p>(i) The length adjustment device of the shoulder strap shall be positioned on the FHR yoke with the upper edge not more than 70mm from the lower edge of the FHR yoke as shown in Drawing I-7.</p>

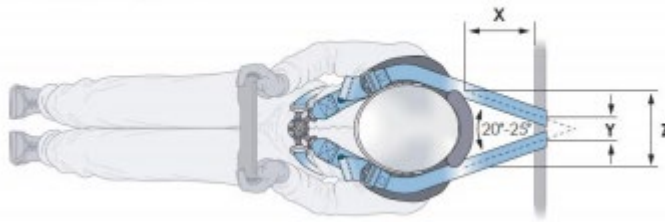


**Drawing I-7**



- (ii) The shoulder strap anchorage points on the automobile shall be symmetrical about the centre line of the driver's seat. When viewed from above, the angle between the shoulder straps shall be approximately 20°-25° as shown in Drawing I-8.

**Drawing I-8**



- (iii) This can be achieved with reference to the values in Table I-3

**TABLE I-3**

**Table 1: Reference Values for 120mm FHR Collar**

Z FHR COLLAR WIDTH (MM)	120							
X FHR to belt anchorage (mm)	100	200	300	400	500	600	700	800
Y belt anchorage to separation (mm)	135- (110)	95 (70)	55 (30)	15 (-10)	-25 (-50)	-65 (-90)	-105 (-130)	-145 (-170)

**Table 2: Reference Values for 140mm FHR Collar**

Z FHR COLLAR WIDTH (MM)	140							
X FHR to belt anchorage (mm)	100	200	300	400	500	600	700	800
Y belt anchorage to separation (mm)	155 (130)	115 (90)	75 (50)	35 (10)	-5 (-30)	-45 (-70)	-85 (-110)	-125 (-150)

**Table 3: Reference Values for 160mm FHR Collar**

Z FHR COLLAR WIDTH (MM)	160							
X FHR to belt anchorage (mm)	100	200	300	400	500	600	700	800
Y belt anchorage to separation (mm)	175 (150)	135 (110)	95 (70)	55 (30)	15 (-10)	-25 (-50)	-65 (-90)	-105 (-130)

**Table 4: Reference Values for 180mm FHR Collar**

Z FHR COLLAR WIDTH (MM)	180							
X FHR to belt anchorage (mm)	100	200	300	400	500	600	700	800
Y belt anchorage to separation (mm)	195 (170)	155 (130)	115 (90)	75 (50)	35 (10)	-5 (-30)	-45 (-70)	-85 (-110)

Definitions for the reference values:

- dimension Z (mm) = width of the FHR collar, as shown in Drawing I-8 and I-10
- dimension X (mm) = distance from the rear edge of the FHR-belt-bearing-surface to the automobile attachment point (mm) as shown in Drawing I-8
- dimension Y (mm) = separation of the centres of the two shoulder straps at the automobile attachment points (mm) as shown in Drawing I-8

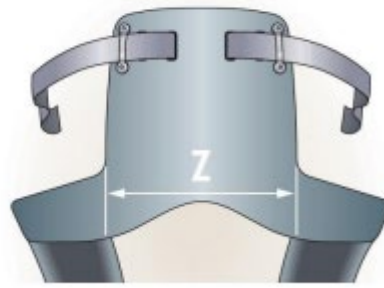
Values calculated based on 75mm wide straps (values for 50mm wide straps are shown in brackets)

Values in **ORANGE** colour denote that theoretical separation is less than belt width. In this case it is recommended that the belts are installed side by side to avoid any overlap, hence the actual separation shall be equal to the belt width. If the value is negative, the belt straps should be crossed.

NOTE: Shoulder straps over 200mm long are permitted but not recommended.

which have been calculated based on 75mm wide belts (values for 50mm wide belts are shown in brackets) and four FHR collar sizes according to Drawing I-10.

Drawing I-10



(iv) Negative values indicate that the shoulder straps are crossed. These values should be closely respected, but a tolerance of +/- 20 mm would be acceptable. Strap movement in the anchorages should be taken into account. (iv) The values in red (underlined) denote that theoretical separation is less than strap width. In this case it is recommended that the straps are installed side by side to avoid any overlap, hence the actual separation shall be equal to the strap width. If the value is negative, the strap should be crossed. Shoulder straps over 200mm long are not recommended.

## Section 27. Window Nets

### Requirement

Highly recommended.  
Refer [Schedule I](#) – Page 3.  
Each 5th Category automobile, when competing in an event exclusively for such an automobile, is exempt from the requirement for Window Nets.  
Group N is sometimes combined in races with non-historic categories, and in such cases, the dispensations granted in relation to safety for historic racing no longer apply. Cars must be fitted with the safety items applying to the relevant category and level of the event. Potentially this could include, but is not necessarily limited to, items such as “full” roll cages and window nets.  
Refer [Schedule I](#) – Page 2.  
In a circuit race, each closed automobile which is required to have a safety window net fitted in the driver’s door window opening.  
(i) The window net must cover the opening forward to the centre of the steering wheel and be able to withstand a load of 500N applied at any point.  
(ii) The net may be locally modified to preserve the driver’s view of the external mirror.  
(iii) The net must be affixed by means of a rapid release system so that, even with the automobile inverted it must be possible to detach the mechanism with one hand.  
(iv) The handle or lever must have coloured markings.  
(v) A push button release system is authorised provided that it respects the prescriptions of this article. The push button must be visible from the outside, be of a contrasting colour and be marked “press”.  
Refer [Schedule I](#) – Pages 2 and 3.  
Each automobile in a circuit race shall, of necessity, be fitted with a window net as required by Schedule I.  
Refer [Safety Requirements](#) – Page 2

## Section 28. Rain Lights

### Requirement

Refer to [Safety](#) - page 2.

Vehicles in all historic groups, while competing in competitions specifically limited to such vehicles and mixed category single-car speed competitions, are exempted from normal Motorsport Australia requirements in respect of safety rain lights (strongly recommended in compliance with Schedule C).  
Refer to [Schedule C](#) - page 2.  
Each automobile in a circuit race shall, of necessity, also be required to be fitted with a rearward facing red warning lamp (rain light) which must be clearly visible from the rear and mounted not more than 100mm from the centreline of the automobile. Each lamp must:

- (i) be of at least 15 watts or an LED lamp with FIA and/or Motorsport Australia approval may be used and may strobe;
- (ii) have a minimum surface area of 20cm<sup>2</sup> and a maximum surface area of 140cm<sup>2</sup>; and
- (iii) be able to be switched on by the driver when normally seated in the automobile.

## Section 29. Seats

### Seats

#### Driver's seat

Refer to [Interior](#) - page 4.  
The original driver's seat may be replaced by a seat meeting the requirements of [Schedule C](#) (refer "General Requirements for Cars and Drivers") and the seat style illustrations set out in "[Seats for Groups Na, Nb, Nc, Sa, Sb and Sc List](#)", provided it is the product of a commercially recognised aftermarket seat manufacturer.  
Refer to [Vehicle Eligibility- 5<sup>th</sup> Category – Historic - Seats](#)  
Motorsport Australia does not maintain lists of specifically-approved seats for these groups. The following are guidelines only, and should be read in conjunction with [Schedule C](#), (refer "General Requirements for Cars and Drivers" in the Motorsport Australia Manual), and the general regulations for Groups N and S as may be applicable. It should be noted that, at all times, seats should be, both in style, trim and colour, such as to reflect the period of racing being portrayed by the relative group.  
It is mandatory that seats with integral headrests should have seat belt slots to ensure proper location of the shoulder and lap straps. Where a separate headrest is used with standard seats, the headrest must be supported on the same structure as the seat and must not be able to be moved independently.  
Refer to [Schedule C](#)  
Each automobile in a circuit race shall, of necessity, in addition to the provisions of Schedules A and B, be fitted only with such replacement seat which in a closed automobile first registered with Motorsport Australia after 1 January 1980, and in which the relevant regulations permit the replacement of the driver's seat and which:

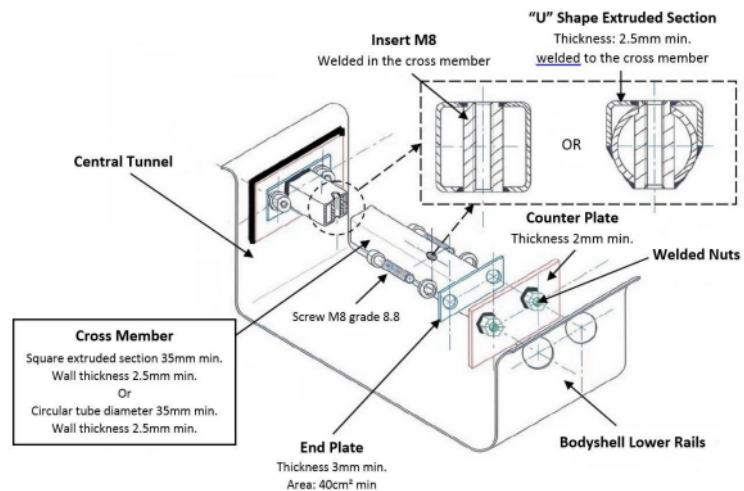
- (i) incorporates a head restraint; and
- (ii) does not incorporate adjustment of the rake of the squab.

NOTE: The use of a seat to the FIA 8862-2009 Advanced Racing Seat standard is recommended. Where a seat to this standard is required, the seat shall be used with the seat mount bearing the same FIA homologation number unless an alternative seat mount has been homologated by Motorsport Australia, in which case that seat mount may be used with a seat mount/support fixed as per the following:

- (i) Where an automobile is in compliance with the Australian Design Rules (ADR) for seat mountings, on the anchorage points for fixing seats used on the original automobile; or

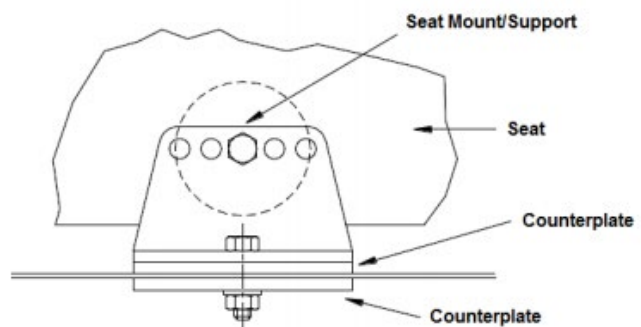
(ii) On anchorage points for fixing seats in conformity with Drawing C-1; or

**DRAWING C-1**



(iii) Where a seat is affixed to an un-reinforced section of the floor pan, each attachment point shall be reinforced by the use of a plate of not less than 40cm<sup>2</sup>. The minimum thickness of each support and counterplate shall be 3 mm for steel and 5 mm for light alloy material. A seat mount/support must be attached to the shell/chassis using at least 4 mounting points per seat using 8.8 grade bolts with a minimum diameter of 8mm with counterplates, in compliance with Drawing C-2.

**DRAWING C-2**



An anchorage point for fixing a seat may be in compliance with Drawing C-1. A cross member may be welded in place instead of fixing by bolts providing the connection is fully welded around the circumference.

**Seats**  
**Passenger's seat**

Refer to [Interior](#) - page 4.  
It is permissible also to replace the passenger seat with a seat of similar specification in size, style, appearance, colour and trim to the replacement driver's seat.

**Seats**  
**Rear seat**

Refer to [Interior](#) - page 4.  
The original rear seats must be retained in all respects, including location, save where varied in 5<sup>th</sup> Category, Vehicle Eligibility – Historic Sports.  
Refer [Safety Requirements](#) – page 2.  
Rear seats may be locally modified to permit the fitment of a safety cage structure.  
Refer [General](#) – Page 2.  
A rear set may be folded down.

**International events**

Refer to [Interior](#) - page 4.  
In the case of events listed on the FIA International calendar, the replacement seat must also carry FIA approval

## Section 30. Interior

<b>Requirement</b>	Refer to <a href="#">Interior</a> - page 2. Unless otherwise specified, all original interior trim and fittings as supplied by the manufacturer for the model in question must be in place.
<b>Floor coverings</b>	Refer to <a href="#">Interior</a> - page 2. Floor coverings may be removed. Insulating materials may be added.
<b>Trim</b>	Refer to <a href="#">Interior</a> - page 2. Where the original trim has deteriorated, restoration is permitted and encouraged, but should be as near as practicable to original specifications. Refer <a href="#">General</a> – Page 2. Complete parts of upholstery or trim shall not be removed; however, the interior trim and dashboard may be modified locally (e.g. by cutting or distorting) in order to fit a safety cage structure

## Section 31. Steering Wheel

<b>Replacement</b>	Refer to <a href="#">Interior</a> - page 2. The steering wheel may be replaced, provided that the replacement wheel is not less than 320mm diameter, unless the original wheel was of a lesser diameter, in which case a replacement of at least equal diameter to the original is acceptable.
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## Section 32. Instruments and Switches

<b>Requirement</b>	Refer to <a href="#">Interior</a> - page 2. Original instruments and switches may be replaced, provided that they are replaced by items compatible in face, style and size with the other instruments.
<b>Additional instruments</b>	Refer to <a href="#">Interior</a> - page 2. Additional instruments/equipment of compatible style may be fitted into a separate panel.
<b>Tachometer Engine revolution speed limiters</b>	Refer <a href="#">Engine Revolution Speed Limiters</a> Page 6. Electronic engine RPM limiters are permitted in all groups, but only limiters that are separate from and not part of a tachometer and that perform no other function. Refer <a href="#">Electronic Components</a> – page 8 Electronic rev limiter (in tachometer) – not permitted.
<b>Tachometer Additional</b>	Refer <a href="#">Interior</a> Page 4. An additional tachometer may be fitted provided the glass face does not exceed 105mm in diameter, the unit does not provide any other electrical function and only mechanical types of maximum rev indicator are permitted. Refer <a href="#">Electronic Components</a> Electronic tachometer (period appearance) – permitted.

## Section 33. Gearchange light/Shift light

<b>Requirement</b>	Refer to <a href="#">Electronic components</a> – Page 8 Not permitted
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## Section 34. Engine revolution speed limiter

<b>Requirement</b>	Refer to <a href="#">Engine Revolution Speed Limiters</a> – Page 6. Electronic engine RPM limiters are permitted in all groups, but only limiters that are separate from and not part of a tachometer and that perform no other function.
<b>Location</b>	This rev limiter must be mounted in a visible, easily accessible position in the engine bay. The operation of this MSD Soft Touch rev limiter will be subject to tests at race meetings.

<b>Engine revolution speed limiters</b>	Refer <a href="#">Engine Revolution Speed Limiters</a> Page 6. Electronic engine RPM limiters are permitted in all groups, but only limiters that are separate from and not part of a tachometer and that perform no other function. Refer <a href="#">Electronic Components</a> – page 8 Electronic rev limiter (separate) – permitted.
<b>Engine revolution speed limiters In tachometer</b>	Refer <a href="#">Engine Revolution Speed Limiters</a> Page 6. Electronic engine RPM limiters are permitted in all groups, but only limiters that are separate from and not part of a tachometer and that perform no other function. Refer <a href="#">Electronic Components</a> – page 8 Electronic rev limiter (in tachometer) – not permitted.

## Section 35. On board lap timer

<b>Requirement</b>	Refer to <a href="#">Electronic components</a> – Page 8 Not permitted
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## Section 36. Radios

<b>Requirement</b>	Refer to <a href="#">Electronic components</a> – Page 4 Car to pit radio not permitted. RMC – Race management listen only (where available) permitted.
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## Section 37. Heaters

<b>Requirement</b>	Refer to <a href="#">Interior</a> - page 2. Heaters must remain in place unless the particular model of the vehicle in question was available from the manufacturer without a heater fitted. Heater cores may be removed. Heater hoses are optional.
<b>Cores and Hoses</b>	Refer to <a href="#">Interior</a> - page 2. Heater cores may be removed. Heater hoses are optional.

## Section 38. Fire Extinguishers

<b>Fire extinguisher Requirement</b>	Highly recommended. Refer <a href="#">Safety Equipment</a> - page 4. All vehicles must be equipped with a fire extinguisher that complies with – Fire Extinguishers Technical Appendix Schedule H of at least 900g capacity. Refer <a href="#">Schedule B</a> – Page 1 Each automobile must, of necessity, in any speed event or race be fitted with a fire extinguisher compliant with Schedule H. Refer – <a href="#">Fire extinguishers</a> Page 1. Each automobile in any competition other than Non-Speed or Race events, except where noted in specific Group/category/class regulations, must be equipped with a fire extinguisher .....
<b>Fire extinguisher Hand Held</b>	Highly recommended. Refer – <a href="#">Fire extinguishers</a> Page 1. a. Each hand-held fire extinguisher shall be secured using a metal bracket attached to the automobile with only high tensile bolts or equivalent fasteners and/or sufficient clamp/s and must remain restrained under a deceleration or acceleration of 25g; and b. Must be capable of removal by the driver (or crew, where applicable) while seated in their normal respective position for competition with safety harness unfastened, unless varied by specific category regulations and without the aid of tools.  The following information must be visible on each extinguisher: (i) capacity; (ii) type of extinguishant; (iii) weight or volume of the extinguishant; and

<p><b>Fire extinguisher Plumbed in</b></p>	<p>(iv) date of manufacture of the extinguisher.  Refer – <a href="#">Fire extinguishers</a> Page 1.  Each plumbed-in fire extinguisher must be fitted in accordance with the Code Appendix J – Article 253 – Safety Equipment at <a href="http://www.fia.com/regulation/category/123">www.fia.com/regulation/category/123</a> and with attention to the following:</p> <ol style="list-style-type: none"> <li>a. Each extinguisher container must be adequately protected and may be situated within the cockpit or luggage compartment. If situated in the luggage compartment it must be at least 300mm from the outer edge of the bodywork in all horizontal directions.</li> <li>b. The container must be secured by a minimum of 2 screw-fastened metallic straps and the securing system must be able to withstand a deceleration of 25g.</li> <li>c. Anti-torpedo tabs must be fitted.</li> <li>d. All extinguishing equipment must withstand fire, including the attachments of lines and nozzles.</li> <li>e. The Driver (and co-driver where applicable) must be able to trigger the extinguishing system manually when seated normally with their safety harnesses fastened and the steering wheel in place.</li> <li>f. A means of triggering from the outside must be provided in the location of the external battery isolation (master) switch. It must be marked with a letter "E" in red inside a white circle of at least 10 cm diameter with a red edge.</li> <li>g. Each plumbed-in fire extinguisher must be in an active, armed or ready to use state when the Automobile is in use.</li> </ol>
<p><b>Fire extinguisher system Exemption</b></p>	<p>Refer <a href="#">Safety</a> – Page 2  Vehicles in all historic groups, while competing in competitions specifically limited to such vehicles and mixed category single-car speed competitions, are exempted from normal Motorsport Australia requirements in respect of fire extinguishing systems (but not fire extinguishers – refer Schedule H, “General Requirements for Cars and Drivers” in the Motorsport Australia Manual).</p>
<p><b>Fire extinguisher Halon</b></p>	<p>Refer <a href="#">Fire extinguishers</a> – Page 1  Halon extinguishers (1201 or 1311, including BCF) are not permitted under civil legislation.</p>
<p><b>Fire extinguisher Inspection</b></p>	<p>Refer <a href="#">Fire extinguishers</a> – Page 1  Each hand-held extinguisher should be inspected by a scrutineer at targeted scrutiny, or otherwise prior to Competition. This inspection will involve visually checking the unit and its mountings for damage and corrosion, checking the pressure of the contents via an installed gauge, and inverting and shaking the container to check for settling of the extinguishant. Where practical, it is recommended the extinguisher be weighed (mandatory where no gauge is installed).</p>
<p><b>Fire extinguisher Service</b></p>	<p>Refer <a href="#">Fire extinguishers</a> – Page 1  Each AS1841 standard fire extinguisher must be serviced every three years in accordance with AS1851 for a fire extinguisher in an adverse operating environment. If the extinguisher is compliant with another acceptable standard, it shall be serviced every two years. This servicing shall be undertaken in accordance with the procedures laid out by the manufacturer and/or the relevant standard (e.g. AS1851 for AS1841 extinguishers) and shall include a hydrostatic pressure test of the extinguisher body. A report from the servicing agent shall be supplied to a scrutineer on demand as proof of a service being completed. A service tag shall not be accepted as proof of the extinguisher having been serviced. Each fire extinguisher which is homologated by the FIA shall be serviced either by the manufacturer or their agent no more than two</p>

years after either the date of filling or the date of the last service. This servicing shall be undertaken in accordance with the procedures laid out by the manufacturer and/or the relevant standard and shall include a hydrostatic pressure test of the extinguisher body.

## Section 39. Towing Point

### Requirement

Refer [Safety](#) – Page 2

Vehicles in all historic groups, while competing in competitions specifically limited to such vehicles and mixed category single-car speed competitions, are exempted from normal Motorsport Australia requirements in respect of towing eyes.

Refer [Schedule B](#) – Page 2.

Each automobile shall, of necessity, in any speed event or race be fitted with a visible towing point (capable of accepting a 40mm OD cylindrical test object) fitted forward of the front axle and rearward of the rear axle and capable of towing the automobile on a sealed surface with its wheels locked. Where a tow point is obscured, each tow point shall be marked with the word “TOW” of a contrasting colour marking the location of each tow point. A road registered series production automobile fitted with any unmodified original equipment tow point shall be exempt from these requirements, save for the requirement to identify an obscured front and/or rear tow point.