

## SPECIFIC TECHNICAL REGULATIONS FOR NATIONAL HOMOLOGATION

### Important Notes:

The following document is a technical proposal for a nationally developed 4 wheel-drive rally car intended [as a replacement for FIA Group N] that provides a similar specification to the current FIA R5 that is ostensibly able to be 'self-built' from locally sourced components.

The draft proposal encompasses the following provisions which initially have been adopted to cater for as wide a customer base as possible although it is envisaged that a number of these provisions may be removed as the category develops or as required in order to achieve parity with existing car categories and/or to gain FIA regional approval.

- Freedom of choice to national or regional build specification
- Freedom of choice to engine capacity (as per engine capacity classes)
- Freedom of choice to many component parts
- Freedom of choice to source of component parts

The regulations are written primarily for national competitions although include a number of alternative specifications that are envisaged to enable a 'Nationally Homologated' car to be 'Regionally Approved' for international competitions in the Asia Pacific region.

Text **highlighted such** has not been finalised / completed hence is subject to change.



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## SPECIFIC TECHNICAL REGULATIONS FOR NATIONAL RALLY - GROUP **NZ4**

This document is to be read in conjunction with the **'Build Specification Manual'** as published by MotorSport New Zealand and available upon request from the MSNZ Technical Department.

Clause No. and Homologation Form Article No.	Regional Approval	Category of Component Part	REGULATION
<b>Article 1.0</b>			<b>Definition:</b>
	<b>R</b>		<p>NZ4 is a rally category developed for National and Regional competition for forced induction 4 wheel-drive cars based upon the principles of FIA Group R5. It is intended to create cars of similar performance to that of the current FIA International class R5 as well as Super 2000 Rallies and Group N (including R4) categories.</p> <p>The concept of the NZ4 [car] regulations ensures that the cars can be locally built from locally sourced component parts controlled either directly or indirectly by the ASN [MotorSport NZ]. The intention is to ensure that the build specification is controlled whilst guaranteeing that initial build as well as ongoing maintenance costs are kept within realistic bounds.</p> <p>Manufacturer involvement is encouraged with respect to promoting their brand through support of Competitors / Teams in building and campaigning their product.</p> <p>NZ4 cars with solely <u>ASN - National Homologation</u> are eligible for National events held in New Zealand.</p> <p>NZ4 cars with <u>FIA Regional Approval</u> are additionally eligible for FIA sanctioned events held in the Asia Pacific Region.</p>
<b>Article 1.1</b>			<b>General conditions:</b>
	<b>R</b>		<p>Any specific inquiry relative to these regulations shall be directed to MotorSport NZ (ASN).</p> <p><b>The following regulations are primarily written in terms of ASN – National Homologation although where specified in the left-hand column an additional or alternative specification may be applicable to gain FIA Regional Approval.</b></p> <p>These regulations shall be read in conjunction with;</p> <ul style="list-style-type: none"> <li>▪ The individual ASN homologation form issued to the model of car represented, and</li> <li>▪ FIA Appendix J articles 251, 252 and in particular article 253 Safety Equipment, or</li> </ul>

			<ul style="list-style-type: none"> <li>▪ Appendix Two Schedule A of the current MotorSport NZ Manual (where specifically authorised under these regulations).</li> </ul> <p>A MotorSport NZ vehicle Logbook / Passport is mandatory for all NZ4 cars.</p> <p>NZ4 cars used in rallies (on open roads) must be legally registered for road use; hence an LVV Authority Card and Certification are mandatory.</p>
<b>Article 2.0</b>			<p><b>Homologation:</b></p> <p>The basis of the NZ4 car is a Series Production model taken from a manufacturer's "family" of 25000 units produced within 12 consecutive months.</p> <p>Different Series models belonging to one and the same production series of the same manufacturer. At least 25000 cars with identical external general lines of bodywork must have been produced in 12 consecutive months. The material of the bodywork and the wheelbase must also remain identical.</p> <p>All models must be available through the normal commercial channels of the manufacturer and variants with a cylinder capacity greater than 2 litres may possibly be counted for establishing the family.</p> <p>The general external lines of the bodywork may vary in the following details;</p> <ul style="list-style-type: none"> <li>- Shape and material of front and rear bumpers</li> <li>- Removable aerodynamic devices (spoilers, wings, sill mouldings)</li> <li>- Control and comfort equipment (sunroof, auxiliary lamps, door handles, exterior mirrors)</li> <li>- Decorative strips and mouldings</li> <li>- Left and right-hand versions</li> <li>- 2 and 4 door versions, provided that these differ only with regard to the doors, door openings and 'B' pillar.</li> </ul> <p>MotorSport NZ (ASN) National Homologation is mandatory. A National homologation form (hereinafter referred to as 'homologation form') shall be completed in conjunction with the MotorSport NZ Technical Department (ASN) for the initial build of a specific make and model of car. Contact the MotorSport NZ Technical Department for further information.</p> <p><i>R</i> FIA Regional Approval is optional.</p> <p>Note: Constructors are encouraged to build cars that will gain "approval" under the conditions of the FIA's document entitled 'Acceptance of national car categories in regional rally championships'. FIA Regional Approval means a car will be eligible to compete in international rallies within the Asia Pacific region.</p> <p>Eligible models (base car) do not necessarily have to appear on the list of FIA homologations issued by the FIA, although this is of significant help in sourcing the technical information / specification required for the creation/approval of the prerequisite National Homologation Form.</p> <p>Technical information / specification shall be sourced directly from the car manufacturer for models not homologated by the FIA.</p>
<b>Article 2.1</b>			<p><b>Eligible cars:</b></p> <p>Touring Cars or Large Scale Series Production Cars.</p> <p>Cars must have at least four seating positions; according to the dimensions defined under FIA Group A (refer Build Specification Manual).</p> <p><b><u>Confirmation of make / model eligibility shall be sought prior to commencement of build.</u></b></p>
<b>Article 2.2</b>			<p><b>Engine capacity classes:</b></p>
<b>103</b>			<p><b>NZ4</b> is divided into the following engine capacity classes;</p>

	<b>R</b>		<ul style="list-style-type: none"> <li>• 4 cylinder up to 1600 cm<sup>3</sup> (forced induction) – refer note 1 and 2</li> <li>• 4 cylinder up to 2000 cm<sup>3</sup> (forced induction) - refer note 3</li> <li>• 4 cylinder over 2001 cm<sup>3</sup> (normally aspirated only) – refer note 4</li> </ul> <p><b>Note 1:</b> No cylinder capacity calculation coefficient applied  <b>Note 2:</b> Only engines up to 1620 cm<sup>3</sup> are eligible for Regional Approval  <b>Note 3:</b> It is envisaged that only 4 cylinder engines up to and including 1600 cc will be eligible from the specified <u>date TBC</u>  <b>Note 4:</b> It is envisaged that engines over 2001 cc will be phased out from the specified <u>date TBC</u></p>
<b>Article 2.3</b>			<b>Component parts:</b>
		<b>SP</b>	<p>Component parts of the car are classified as follows;</p> <ul style="list-style-type: none"> <li>• <b>Series Part;</b> being original parts or replacement parts identical to the original parts as fitted to the car at the time of manufacture or subsequently replaced due to use or accident. All such parts shall be available through the original car manufacturer's dealer network. All relevant specifications shall be detailed in the homologation form specific to the car in question.  <b>Note:</b> An [approved] alternative engine from the manufacturers group shall be classified as a 'Series Part'.</li> </ul>
		<b>CP1</b>	<ul style="list-style-type: none"> <li>• <b>Control Part Category 1;</b> being parts detailed in and respecting the specification as prescribed in the homologation form specific to the car in question and as supplied through the designated/approved supplier.  <b>Note:</b> Many control parts will be common to a number of different models of car.</li> </ul>
		<b>CP2</b>	<ul style="list-style-type: none"> <li>• <b>Control Part Category 2;</b> being parts respecting the criteria of Category 1 Control parts except they may be freely sourced.</li> </ul>
		<b>FP</b>	<ul style="list-style-type: none"> <li>• <b>Free Part;</b> being parts that may be sourced freely. Such parts may be removed or replaced with another part on condition that the substitute part has no additional function relative to the part it replaces. These parts may have other conditions imposed under these regulations.</li> </ul>
<b>Article 2.4</b>			<b>Authorised modifications and additions:</b>
			<p>These regulations are written in terms of authorisation therefore any modification and/or addition [to the Series model represented] not expressly authorised hereinafter is prohibited.</p> <p>The limits of the modifications and fittings allowed shall be specified under the appropriate article.</p> <p>Apart from these, any part worn through use or accident can only be replaced by a part as specified within these regulations.</p> <p>Nuts, bolts and screws; throughout the car may be replaced by any other nut, bolt or screw and have any kind of locking device (washer, locknut etc.).</p>
<b>901</b>			<p>The following parts / modifications <u>must</u> be specifically homologated under NZ4 and detailed on the car's National Homologation Form;</p> <ul style="list-style-type: none"> <li>- Safety cage – design and homologation to be approved by MotorSport NZ (ASN) - refer FIA document Homologation Regulations for Safety Cages.</li> <li>- Seat supports and anchorages – design to be approved by MotorSport NZ (ASN) in conjunction with safety cage homologation.</li> <li>- Safety harness mounting points – design to be approved by MotorSport NZ (ASN) in conjunction with safety cage homologation.</li> <li>- Modifications / lightening of the bodyshell – to be approved in conjunction with safety cage homologation.</li> </ul>

		<p><b>Materials;</b> notwithstanding the above, the use of magnesium alloy, ceramics and/or titanium alloy is not authorised except in the case of those parts fitted to the series model.</p> <p>The lower side protections of the bodywork parts may be made of several layers of Kevlar, carbon fibre, fibreglass, aluminium or stainless steel.</p> <p>The fuel tank protections may be made from several layers of Kevlar, carbon fibre, fibreglass, aluminium or stainless steel.</p>
<b>Article 2.5</b>		<b>Minimum weights:</b>
201	<b>R</b> <b>N</b>	<p>The minimum <u>weight of the actual car</u> shall be 1230 kg under the conditions set out below;</p> <p>The minimum <u>weight of the actual car</u> shall be as published in the <b>National Car Weights Chart</b> under the conditions set out below;</p> <p>The actual car weight; this is the real weight of the car, with only one spare wheel and neither the driver, nor co-driver, nor their safety equipment. Their equipment comprises of the following:</p> <ul style="list-style-type: none"> <li>- Driver's helmet + FHR device</li> <li>- Co-driver's helmet + FHR device.</li> </ul> <p>When two spare wheels are carried in the car, the second spare wheel must be removed before weighing.</p> <p>The use of ballast is permitted under the conditions provided for in Schedule A Article 6.1 [or App J Article 252-2.2].</p>
201	<b>R</b> <b>N</b>	<p>The minimum <u>weight of the competing car</u> shall be 1390 kg under the conditions set out below;</p> <p>The minimum <u>weight of the competing car</u> shall be as published in the <b>National Car Weights Chart</b> under the conditions set out below;</p> <p>The competing car weight is the weight of the car as it competes with the crew on-board (driver + co-driver with their safety equipment) and one spare wheel. When two spare wheels are carried in the car, the second spare wheel must be removed before weighing.</p> <p>At no time during the competition may a car weigh less than this minimum weight.</p> <p>In case of a dispute during weighing, the full equipment of the driver and co-driver will be removed; this includes their helmets and FHR's, but the headphones external to the helmets may be left in the car.</p> <p>The use of ballast is permitted under the conditions provided for in Schedule A Article 6.1 [or App J Article 252-2.2].</p>
<b>Article 3.0</b>		<b>Engine - Type / Specification:</b>
300	<b>R</b> <b>SP</b>	<p>Any engine of the manufacturer's group may be used on the following conditions:</p> <p>At least 2500 identical engine units must have been produced in 12 consecutive months. It will be possible to count models from another manufacturer, provided that they are equipped with the same engine (strictly identical) and produced in a quantity of at least 1000 units in 12 consecutive months.</p> <p>Any engine unit sourced from the manufacturer's group retail model range worldwide.</p> <p>The engine shall be regulated to a maximum output of <b>250HP (186.5 Kw)*</b>. This is to be controlled by;</p> <ul style="list-style-type: none"> <li>- ECU, and/or</li> <li>- Throttle body, and/or</li> <li>- Engine (air) restrictor.</li> </ul>

			<p>The engine specifications, including the bore and stroke, shall be detailed on the homologation form.</p> <p>A re-bore of the engine block [standard engine reconditioning practices] is authorised to a maximum of 1.0 mm without this leading to the capacity class limit being exceeded.</p> <p>Re-sleeving of the engine block is authorised provided the sleeves have a circular internal section and are concentric with the cylinders, dry or wet and distinct from one another.</p> <p>For the sole purpose of being able to fit the gearbox, as well as some ancillary equipment such as engine mounts, local external machining of the engine block is authorised.</p> <p>Fasteners {screws, bolts, studs, nuts etc.} may be changed provided that the replacements are made from ferrous material.</p> <p><b>*Performance data to be confirmed relative to R5 figures</b></p>
<b>301</b>			<p><b>Engine position and mountings:</b></p> <p>The position of the engine shall be described on the homologation form.</p> <p>The engine may be orientated in either a longitudinal or transverse position under the following conditions;</p> <ul style="list-style-type: none"> <li>- The engine may be moved in its compartment in relation to the series model although it may not be moved outside of the parameters of the original compartment,</li> <li>- The top 1/3<sup>d</sup> (section) of the bulkhead shall not be modified / changed in order to accommodate engine placement,</li> <li>- Mountings are a free part hence the number and position is not controlled.</li> </ul>
<b>334</b>			<p><b>Turbocharger:</b></p>
		<b>SP/ FP</b>	<p>The series part is authorised as detailed in the homologation form, or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- The turbocharger assembly shall come from a recognised manufacturer of turbochargers (produced in a quantity of at least 2500 units),</li> <li>- The turbocharger must be a single unit, with single stage compression and expansion, and must not have variable pitch or variable geometry.</li> </ul>
		<b>FP</b>	<p>An adapter is authorised between the exhaust manifold and the turbocharger on condition that the thickness of this component is less than 30 mm.</p>
	<b>R</b>		<p>The maximum boost pressure is <b>2.5 bar</b> absolute.</p>
	<b>R</b>	<b>CP1</b>	<p><b>Control of boost pressure.</b> To ensure that the maximum authorised boost is not exceeded during competition a boost control system (pop-off valve) shall be fitted. (Refer - FIA Technical list n°43).</p>
	<b>R</b>		<p>The 'pop-off valve' shall be fitted as detailed on the homologation form (generally as close to the throttle valve as possible) and in such a way that two screws have to be entirely removed in order to remove it. The screws require provision for sealing wire (and may be sealed by the scrutineers).</p>
			<p><b>Turbocharger restrictor:</b></p>
	<b>R</b>		<p>For engines up to and including 1600 cc – <b>no restrictor</b> is required.</p> <p>For engines up to and including 1600 cc – <b>a 33 mm restrictor</b> shall be fitted. All the air necessary for feeding the engine must pass through this restrictor which shall respect the following specifications;</p> <ul style="list-style-type: none"> <li>- The maximum internal diameter shall be 33 mm maintained for a minimum of 3 mm measured downstream of a plane perpendicular to the rotational axis situated at a maximum of 50 mm upstream of a plane passing through the most upstream extremities of the wheel blades (refer FIA drawing 254-4).</li> </ul>

			<ul style="list-style-type: none"> <li>- The diameter shall be complied with irrespective of the temperature conditions.</li> <li>- The external diameter of the restrictor at its narrowest point shall be less than 39 mm which must be maintained over a distance of 5 mm to each side.</li> <li>- The restrictor shall be made from a single material and may be pierced solely for the purpose of mounting and sealing.</li> <li>- Mounting of the restrictor to the turbocharger must be carried out in such a way that two screws have to be entirely removed in order to detach the restrictor from the compressor housing.</li> </ul> <p>For engines over 1600 cc up to 2000 cc - a <b>34 mm restrictor</b> shall be fitted. All the air necessary for feeding the engine must pass through this restrictor which shall respect the following specifications;</p> <ul style="list-style-type: none"> <li>- The maximum internal diameter shall be 34 mm maintained for a minimum of 3 mm measured downstream of a plane perpendicular to the rotational axis situated at a maximum of 50 mm upstream of a plane passing through the most upstream extremities of the wheel blades (ref: FIA drawing 254-4).</li> <li>- The diameter shall be complied with irrespective of the temperature conditions.</li> <li>- The external diameter of the restrictor at its narrowest point shall be less than 40 mm which must be maintained over a distance of 5 mm to each side.</li> <li>- The restrictor shall be made from a single material and may be pierced solely for the purpose of mounting and sealing.</li> <li>- Mounting of the restrictor to the turbocharger must be carried out in such a way that two screws have to be entirely removed in order to detach the restrictor from the compressor housing.</li> </ul>
<b>334</b>			<b>Intercooler (air exchanger):</b>
		<b>SP/ FP</b>	<p>The series part is authorised as detailed in the homologation form, or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- It is wholly contained within the parameters of the engine compartment and immediately forward of the compartment, and</li> <li>- External water spray systems are authorised.</li> </ul>
<b>317</b>			<b>Piston (complete):</b>
		<b>SP/ FP</b>	<p>The series part is authorised as detailed in the homologation form, or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- The minimum permissible weight of a piston (with pin, circlips and rings) is 400 grams.</li> <li>- Each piston must have at least three piston rings with a minimum (singular ring) thickness of 0.95 mm.</li> </ul>
<b>318</b>			<b>Connecting rod:</b>
		<b>SP/ FP</b>	<p>The series part is authorised as detailed in the homologation form, or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- The minimum permissible weight of a connecting rod (with cap, bolts and bearings) is 500 grams.</li> <li>- Only steel is authorised.</li> <li>- The rod cap (big-end) bolts shall be ferrous.</li> </ul>
<b>319</b>			<b>Crankshaft:</b>
		<b>SP</b>	<p>The series part only shall be used, the specification of which shall be detailed in the homologation form. The following conditions apply;</p> <ul style="list-style-type: none"> <li>- The minimum permissible weight of the crankshaft (including pilot bearing) is 12,000 grams which shall be respected irrespective of the following conditions.</li> <li>- The crankshaft may be subjected to additional mechanical treatment and lightening.</li> <li>- The main and connecting rod bearing journals may be reclaimed respecting the standard width.</li> </ul>
		<b>FP</b>	<ul style="list-style-type: none"> <li>- Crankshaft pulleys / gears may be freely sourced.</li> </ul>
<b>320</b>			<b>Flywheel:</b>

		<b>SP/FP</b>	The series part is authorised as detailed in the homologation form, or a free part is authorised under the following conditions; <ul style="list-style-type: none"> <li>- The minimum permissible weight of the flywheel (including ring-gear and fixing bolts) is 3500 grams.</li> <li>- It must be made in one piece with the exception of the starter ring.</li> <li>- Only steel is authorised.</li> <li>- The starter ring must be integrated with the flywheel and must respect a minimum diameter of 250 mm.</li> </ul>
<b>321</b>			<b>Cylinder head:</b>
<b>a) e) f)</b>		<b>SP</b>	The series part only shall be used, the specification of which shall be detailed in the homologation form. The following conditions apply; <ul style="list-style-type: none"> <li>- The material shall remain standard.</li> <li>- The valve seats as well as the valve guides are free although the respective (operating) angles of the valves shall not be changed.</li> <li>- The gasket face (plane) may be re-surfaced by a maximum of 1 mm (for adjusting the compression ratio).</li> </ul>
<b>322</b>			<b>Cylinder head gasket:</b>
		<b>FP</b>	The cylinder head gasket may be freely sourced.
<b>324</b>			<b>Injection System:</b>
		<b>SP/FP</b>	The series part (system) is authorised as detailed in the homologation form, or a new system may be accepted under the following criteria; <ul style="list-style-type: none"> <li>- The maximum number of injectors shall be equal to the number of cylinders.</li> <li>- A new injector rail of free design is authorised, fitted with threaded connectors for connecting the lines and the fuel pressure regulator.</li> <li>- Any other additional injection system (such as water) is prohibited.</li> </ul>
<b>324</b>			<b>ECU / Sensors / Actuators / Data acquisition:</b> <u>ECU system options currently under discussion hence text not confirmed</u>
	<b>N</b>	<b>SP/FP</b>	The series ECU (system) is authorised as detailed in the homologation form or a freely sourced ECU may be accepted under the following criteria; <ul style="list-style-type: none"> <li>- The ECU is a commercially available system from a recognised manufacturer</li> <li>- All actuators must be controlled by the ECU</li> </ul>
	<b>R</b>	<b>CP1</b>	A control part (system) is mandatory under the following criteria; <ul style="list-style-type: none"> <li>- The control ECU and engine control software shall be used together with all the control sensors as detailed in the homologation form.</li> <li>- All actuators must be controlled by the ECU.</li> <li>- Access to the ECU data is provided to the Scrutineers for eligibility compliance.</li> </ul> <p>Wiring looms are free.</p> <p>A totally independent (team) data acquisition system is authorised hence shall have a completely independent loom to that of the ECU system.</p>
<b>325</b>			<b>Camshaft:</b>
		<b>SP/FP</b>	The series part is authorised as detailed in the homologation form, or a free part is authorised under the following conditions; <ul style="list-style-type: none"> <li>- The maximum lift for the inlet valves shall be 11 mm.</li> <li>- The maximum lift for the exhaust valves shall be 11 mm.</li> <li>- If the series camshaft exceeds the maximum lift authorised it must be modified so that the lift does not exceed the stated dimensions</li> <li>- The number of camshaft must remain unchanged.</li> </ul>

327			<b>Intake manifold:</b>
	<i>R</i>	<i>SP/FP</i>	<p>The series part (intake manifold) is authorised as detailed in the homologation form, or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- In both cases modification to the manifold is unrestricted.</li> </ul> <p>For Regional Approval, the following is required;</p> <ul style="list-style-type: none"> <li>- An 'adapter' pipe shall be positioned after the throttle valve to fit the ASN / FIA boost control system (Pop-off Valve).</li> <li>- For the sole purpose of fitting the 'adapter' pipe, it is permitted to add parts between the intake manifold and the pipe, as well as between the pipe and the throttle body.</li> <li>- The ASN / FIA boost control system must be clearly visible and easily accessible (and be detailed on the homologation form, refer article 334).</li> </ul>
324 d)			<b>Throttle valve housing:</b>
	<i>N</i>	<i>SP</i>	<p>The series part (throttle valve housing) is authorised as detailed in the homologation form, or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- The throttle valve size shall be detailed on the homologation form.</li> <li>- The housing may be modified but not the diameter of the opening of the butterfly.</li> <li>- The housing mounting 'bolts' shall be drilled for the possible application of wire seals.</li> </ul>
	<i>R</i>	<i>CP1</i>	<p>The control part is mandatory under the following conditions;</p> <ul style="list-style-type: none"> <li>- The throttle valve size shall be detailed on the homologation form,</li> <li>- The housing may be modified but not the diameter of the opening of the butterfly,</li> <li>- The housing mounting 'bolts' shall be drilled for the possible application of wire seals, and</li> <li>- The housing may be fitted to the inlet manifold using an adapter.</li> </ul>
327			<b>Intake valves:</b>
		<i>SP/FP</i>	<p>The series parts and dimensions as detailed on the homologation form shall be retained, or direct replacement valves are authorised provided they respect the same dimensions and are sourced from a recognised manufacturer.</p>
328			<b>Exhaust valves:</b>
		<i>SP/FP</i>	<p>The series parts and dimensions as detailed on the homologation form shall be retained, or direct replacement valves are authorised provided they respect the same dimensions and are sourced from a recognised manufacturer.</p>
328			<b>Exhaust manifold:</b>
		<i>SP/FP</i>	<p>The series part (exhaust manifold) is authorised as detailed in the homologation form, or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- Only steel, stainless steel or cast iron is authorised.</li> </ul>
328			<b>Exhaust system:</b>
		<i>FP</i>	<p>The exhaust system is free downstream of the turbocharger, provided it respects the following criteria;</p> <ul style="list-style-type: none"> <li>- Fitment does not entail the modification of other components except localised homologated changes to the floor of the bodyshell,</li> <li>- The exit of the exhaust pipe shall be at the rear of the car, and</li> <li>- The noise levels must respect the stated maximum prescribed by the ASN – Reference Schedule A article 3.8 details a maximum of 95 db (A).</li> </ul>

329			<b>Balancing shafts:</b>
			If the series engine was fitted with balancing shafts, these may be removed together with their drive system.
330			<b>Ignition:</b>
		<b>SP/FP</b>	The make and type of spark plugs, ignition coils, rev limiter and leads are free.
331			<b>Cooling system:</b>
		<b>SP/FP</b>	The series part ( <b>water pump</b> ) is authorised as detailed in the homologation form, or a free part is authorised under the following conditions; <ul style="list-style-type: none"> <li>- The pump is either mechanically or electrically driven.</li> <li>- Any modification to the drive system is detailed in the homologation form.</li> <li>- The pump is located in the engine compartment.</li> </ul>
		<b>SP/FP</b>	The series part ( <b>water radiator</b> ) is authorised or a freely sourced part is authorised provided it remains within the engine compartment.
		<b>FP</b>	Coolant hoses may be freely sourced.
		<b>FP</b>	An expansion (header) tank is authorised as are 'air-bleeds'.
333			<b>Lubrication system:</b>
		<b>SP/FP</b>	The series part ( <b>oil sump</b> ) is authorised or a free part is authorised under the following conditions; <ul style="list-style-type: none"> <li>- It is made from either steel sheet or aluminium.</li> <li>- Its sole function must be that of containing oil.</li> <li>- A dry sump system is authorised provided all elements of the system are contained within the engine compartment.</li> </ul>
		<b>SP/FP</b>	The series part ( <b>oil pump</b> ) is authorised or a free part is authorised under the following conditions; <ul style="list-style-type: none"> <li>- The drive-system for the pump must be detailed in the homologation form.</li> <li>- The (oil) pressure regulation system may be modified.</li> <li>- A system (pressure pipe with fittings from a connection on the engine block, or the cylinder head, to the turbo charger and a reverse pipe from the turbo charger to the oil sump or engine block) to lubricate the turbo may be added.</li> </ul> <p>An alternative engine breather system is authorised including the fitment of a supplementary breather tank.</p> <p>Series emission control equipment may be removed.</p>
<b>Article 4.0</b>			<b>Fuel system:</b>
401		<b>CP2</b>	The <b>fuel tank</b> must come from an FIA-approved manufacturer and be compliant with FIA/FT3 1999 minimum specifications. Only one single fuel tank is authorised (minimum capacity of 80 litres and maximum capacity of 110 litres). <p>The location of the fuel tank and pumps must respect the following conditions;</p> <ul style="list-style-type: none"> <li>- It must be situated in the cockpit</li> <li>- The floor of the cockpit may be modified in order to install the fuel tank in the rear seat area; the maximum dimensions of the resulting hole in the floor</li> </ul>

			<p>are 1000 x 500 mm and the side rails cannot be modified</p> <ul style="list-style-type: none"> <li>- It must be at least 50 mm behind the obligatory diagonal member in the main rollbar</li> <li>- It must be forward of the rear wheel centre-line</li> <li>- The bottom of the tank must be at least 80 mm from the lowest point of the chassis.</li> <li>- The pumps must be placed in the tank</li> </ul> <p><b>FP</b> The tank must be contained in a leak-proof box attached to the floor. A 1.2 mm thick metallic screen between the tank and the cockpit is compulsory. The height of the assembly (tank + leak-proof box) must not exceed 600 mm. Only two air-tight and fluid-tight inspection hatches (in addition to the inspection hatch for checking the tank's validity date) in the cockpit are allowed.</p> <p>The <b>fuel circuit</b> must comprise only the following parts;</p> <ul style="list-style-type: none"> <li>- one fuel supply outlet (to the engine),</li> <li>- one fuel return (into the tank),</li> <li>- two quick-action couplings for refuelling (these couplings must be situated inside the vehicle), and</li> <li>- one breather in conformity with article 253 of Appendix J.</li> </ul> <p><b>CP2</b> <b>CP2</b></p> <p>Series emission control equipment may be removed.</p>
<b>Article 5.0</b>			<b>Electrical System:</b>
501		<b>FP</b>	<p>The <b>battery</b> may be freely sourced and its location is unrestricted although if installed in the cockpit, the battery shall be situated behind the driver's or co-driver's seat.</p> <p>The series ignition / starter switch may be retained or a new switch may be fitted.</p> <p><b>FP</b> In all cases, and additional to the series ignition switch, a general circuit breaker shall be fitted accessible from both inside and outside of the car in compliance with Appendix J 253-13. Additionally, it must be operable by both the driver and co-driver (from their normal seated position). It shall disconnect all circuits that keep the engine running including the battery, ignition, fuel pump and alternator.</p>
502		<b>FP</b>	<b>Alternator;</b> the make and type is free provided it remains driven from the engine crankshaft.
502		<b>FP</b>	<b>Starter motor;</b> the make and type is free.
<b>Article 6.0</b>			<b>Transmission System:</b>
602			<b>Clutch:</b>
		<b>SP/FP</b>	<p>The series parts or a free part is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- it shall have a maximum of 2 friction discs (plates), and</li> <li>- the original diameter of the plate is retained, or</li> <li>- if the original diameter is not retained, the minimum diameter of the plate is 183 mm.</li> </ul> <p>Clutch control is free provided it remains foot pedal operated.</p>
603			<b>Gearbox:</b>
	<b>N</b>	<b>SP/FP</b>	The series gearbox or a free part gearbox is authorised under the following conditions;

	<b>R</b>	<b>SP/CP</b>	<ul style="list-style-type: none"> <li>- It is commercially available from a recognised gearbox manufacturer,</li> <li>- It has a maximum of 6 forward ratios + reverse gear.</li> </ul> <p>The series gearbox or a control part gearbox is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- It is sourced from a series production car or is commercially available from a recognised gearbox manufacturer, and</li> <li>- It has a maximum of 6 forward ratios + reverse gear,</li> <li>- Only 2 sets of ratios may be homologated (which shall be detailed in the homologation form).</li> </ul>
		<b>FP</b>	<p>Either an 'H' pattern or sequential gear selection control linkage is authorised provided its operation remains solely mechanical.</p> <p>The gear lever shall be fixed on either the floor or the steering column and can be adjustable.</p>
<b>603</b>		<b>FP</b>	<p>The gearbox mountings are a free part, hence the number and position is not controlled.</p> <p>Additional braces between the chassis and gearbox may be added provided this is their sole purpose, to locate the gearbox.</p>
<b>603</b>		<b>FP</b>	<p>Gearbox cooling - an additional oil cooling device is authorised. The lines, pump and activation method are free.</p>
<b>604</b>			<b>Centre differential:</b>
		<b>SP/FP</b>	<p>The series centre differential or a free part centre differential is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- In all cases an active centre differential is not authorized,</li> <li>- Should the series part be used it must be locked using the series actuating mechanism; electrically in the case of the Subaru DCCD or Electrohydraulic in the case of the Mitsubishi ACD unit,</li> <li>- In both cases the use of an electronic control unit is prohibited,</li> <li>- The series part may be configured to unlock upon application of the handbrake. Such a system must either completely depower the electrical circuit of the electromagnet (Subaru or like system) immediately or reduce the hydraulic pressure applied to the clutch (Mitsubishi or like system) to &gt;10kpa within 1 second. Provision to demonstrate this requirement to the Scrutineers must be provided.</li> </ul>
		<b>FP</b>	<p>A free part will be subject to the following conditions;</p> <ul style="list-style-type: none"> <li>- The fitment of an alternative mechanical locking device/clutch that locks the front and rear drive outputs together is authorised,</li> <li>- This alternative mechanical locking device may release upon the application of the handbrake using only a hydraulic system connected separately to the handbrake lever, independent of the brake system hydraulics,</li> <li>- The fitment of a mechanical Limited Slip Differential is authorised.</li> </ul>
<b>605</b>			<b>Final-drive and differential:</b>
		<b>SP</b>	<p><b>Final-drive and final drive housing;</b> shall be sourced from a series production vehicle. The ratio is not controlled.</p> <p><i>Note: Other final-drive / housings may be authorised upon application in which case this shall be detailed in the homologation form.</i></p>
		<b>FP</b>	<p>Mounts are free provided they utilise the unmodified locations provided on the control rear subframe.</p>
		<b>FP</b>	<p><b>Differential unit;</b> only a mechanical type limited slip differential is authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- Its origin is free provided that it can fit inside the series housing or the homologated housing,</li> </ul>
		<b>FP</b>	<p>An oil cooling device for the rear differential is authorised. Lines, pump and activation method are free.</p>

606			<b>Transverse and longitudinal transmission shafts:</b>
		<b>SP/FP</b>	<p><b>Transverse driveshafts:</b> a series part from a standard production vehicle is authorised as is a custom driveshaft manufactured to industry standards by a specialist company utilising series components. In the latter case the following conditions apply;</p> <ul style="list-style-type: none"> <li>- A minimum shaft diameter of 26 mm applies.</li> <li>- Constant velocity joints derived from a standard production vehicle (may be modified).</li> </ul> <p><b>Note:</b> <i>the outer constant velocity (CV) joint must be matched to the hub carrier / bearing assembly.</i></p>
		<b>SP/FP</b>	<p><b>Longitudinal driveshaft;</b> a series part from a standard production vehicle is authorised as is a custom driveshaft manufactured to industry standards by a specialist company. In the latter case the following conditions apply;</p> <ul style="list-style-type: none"> <li>- The minimum dimensions; outer diameter of 50 mm and thickness of 1.5 mm apply, and</li> <li>- A minimum weight of the complete shaft (without centre bearing) of 8.5 kg applies,</li> </ul> <p><b>Note:</b> <i>In all cases the fitment of a driveshaft 'safety hoop' is highly recommended.</i></p>
<b>Article 7.0</b>			<b>SUSPENSION SYSTEM:</b>
700			<b>Upper suspension (mounting) points;</b> are controlled both front and rear by the control part turrets installed on the bodyshell by the approved constructor.
700		<b>FP</b>	<p><b>Front and rear upper plate;</b> is free in respect to its design provided its sole purpose is to locate the top of the shock absorber (damper) to the bodyshell control part turret. The following conditions apply;</p> <ul style="list-style-type: none"> <li>- Aluminium or steel is authorised.</li> <li>- The shock absorber shaft (top) shall be centrally positioned in the turret.</li> <li>- No provision for adjustment shall be incorporated.</li> </ul>
701		<b>CP2</b>	<p>Front and rear hub carrier / bearing assembly; these are 'control parts' and shall be directly fitted to the control part upright. The following conditions apply;</p> <ul style="list-style-type: none"> <li>- The hub carrier / bearing assemblies are series parts which are factory sealed and may not be serviced.</li> <li>- Direct replacement units of identical specification are authorised.</li> </ul> <p><b>Note:</b> <i>All 4 hub bearing assemblies are identical series parts hence as such may be freely sourced under the control part number.</i></p>
701		<b>CP1</b>	<p><b>Front and rear uprights;</b> these are 'control parts' and shall be directly fitted to the control part wishbones (adapter) and the shock absorber housing. The following conditions apply;</p> <ul style="list-style-type: none"> <li>- The upright shall not be modified in any way shape or form.</li> <li>- The front LH upright may be interchanged with the rear LH upright (identical part).</li> <li>- The front RH upright may be interchanged with the rear RH upright (identical part).</li> </ul> <p><b>Note:</b> <i>There are only two types of upright available, one for the left-hand side and one for the right-hand side. Each unit incorporates the following provisions;</i></p> <ul style="list-style-type: none"> <li>- <i>Attachment (pick-up) point for the lower wishbone (adapter).</i></li> <li>- <i>Attachment point for the shock absorber.</i></li> <li>- <i>Attachment for the steering arm (bracket).</i></li> <li>- <i>Attachment (pick up) point for the rear toe link.</i></li> <li>- <i>Attachment point for the brake calliper (bracket).</i></li> </ul>

			- Attachment point for the hub-carrier / bearing assembly.
701	CP1	<p><b>Front and rear lower wishbones;</b> these are 'control parts' and shall be directly fitted to the control part subframes and the control part uprights. The following conditions apply;</p> <ul style="list-style-type: none"> <li>- The wishbones shall not be modified in any way shape or form.</li> <li>- The bearings may be replaced with bearings of the same type provided no modification of the wishbone is required.</li> <li>- The minimum weight of each complete assembly (with bearings) is 3.000 grams.</li> </ul> <p>The only adjustments possible are those provided for by the control parts.</p>	
701	CP1	<p><b>Front and Rear Subframes:</b> Only the control part front and rear subframe assembly is authorised. It shall be fitted under the following conditions;</p> <p><b>Front subframe;</b> is a 'control part' and shall be initially installed to the bodyshell by an approved constructor under the conditions prescribed - refer article 9.0</p> <ul style="list-style-type: none"> <li>- Two designs of front subframe are available (for either longitudinal or transverse engine / gearbox installation).</li> <li>- The front subframe is one part including all the fixation points.</li> <li>- The front subframe mountings may not be modified and the frame must remain detachable.</li> <li>- A minimum weight of 12 kg applies.</li> </ul> <p><b>Rear subframe;</b> is a 'control part' and shall be initially installed to the bodyshell by an approved constructor under the conditions prescribed - refer article 9.0</p> <ul style="list-style-type: none"> <li>- Only one design of rear subframe is available.</li> <li>- The rear subframe is one part which includes all the fixation points.</li> <li>- The rear subframe mountings may not be modified and the frame must remain detachable.</li> <li>- A minimum weight of 12 kg applies.</li> </ul>	
706 706	FP	<p><b>Front and rear anti-roll bars systems;</b> are free respecting the following conditions;</p> <ul style="list-style-type: none"> <li>- The bars shall be mounted to the locations provided on the control subframes.</li> <li>- The bars must be made from ferrous material.</li> <li>- The anti-roll bars must not be adjustable from the cockpit.</li> <li>- Hollow section anti-roll bars are forbidden; the section must be solid over at least 90% of the overall length.</li> <li>- The anti-roll bar links are free respecting the attachment point on the control part wishbones.</li> </ul>	
707 707	FP	<p><b>Front and rear shock absorbers (dampers) / springs;</b> are free respecting the following conditions;</p> <ul style="list-style-type: none"> <li>- Only McPherson type shock absorbers / spring assemblies are authorised for the front and rear which must be of a commercially available mass-produced (ferrous body) type from a recognised suspension components manufacturer.</li> <li>- Only shock absorber / spring assemblies that fit within the unmodified 'control turret' of the bodyshell are authorised.</li> <li>- Only plain bearings are authorised hence linier bearing type dampers are specifically prohibited.</li> </ul> <p>Parts must come from a large scale production catalogue or from a competition parts catalogue.</p>	
Article 8.0			<b>Braking system:</b>
803			An alternative hydraulic circuit is authorised to that fitted to the series model. ABS systems shall be removed in their entirety.
803	SP/FP		<b>Pedal assembly / pressure regulator;</b> either the series parts are authorised or free parts are authorised under the following conditions;

			<ul style="list-style-type: none"> <li>- A pedal box assembly is authorised provided it is of a commercially available mass-produced type from a recognised brake components manufacturer,</li> <li>- The assembly may be adjustable in relation to its connection to the bodyshell.</li> </ul> <p><b>Pressure regulator / limiter;</b> is authorised either as part of a pedal box assembly or as a separate hydraulic valve, the location of which is free.</p> <p>Parts must come from a large scale production catalogue or from a competition parts catalogue.</p>
803		<b>SP/FP</b>	<p><b>Master cylinders;</b> either the series parts are authorised or free parts are authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- The make and type of master cylinder is free provided it is of a commercially available mass-produced type from a recognised brake components manufacturer.</li> </ul> <p>Parts must come from a large scale production catalogue or from a competition parts catalogue.</p>
803		<b>SP/FP</b>	<p><b>Servo-brake;</b> either the series parts are authorised or free parts are authorised under the following conditions;</p> <ul style="list-style-type: none"> <li>- The make and type of servo unit is free provided it is of a commercially available mass-produced type from a recognised brake components manufacturer, or</li> <li>- The series unit may be removed..</li> </ul>
803		<b>FP</b>	<p><b>Gravel specification - Front calipers;</b> are free as to make and design provided the following conditions are respected;</p> <ul style="list-style-type: none"> <li>- Calipers must be commercially available mass-produced parts from a recognised brake components manufacturer,</li> <li>- Only one caliper unit per wheel is authorised,</li> <li>- Only steel or aluminium is authorised for the caliper housing/body, and</li> <li>- Maximum of 4 pistons per caliper.</li> </ul> <p>Parts must come from a large scale production catalogue or from a competition parts catalogue, except the mounting brackets which may be freely sourced.</p> <p>Titanium and ceramic material is specifically prohibited.</p> <p><b>Tarmac specification – Front calipers; TBA</b></p>
		<b>FP</b>	<p><b>Gravel Specification - Rear calipers;</b> are free as to make and design provided the following conditions are respected;</p> <ul style="list-style-type: none"> <li>- Calipers must be commercially available mass-produced parts from a recognised brake components manufacturer.</li> <li>- Only one caliper unit per wheel is authorised.</li> <li>- Only steel or aluminium is authorised for the caliper housing/body.</li> <li>- Maximum of 4 pistons per caliper.</li> </ul> <p>Parts must come from a large scale production catalogue or from a competition parts catalogue, except the mounting brackets which may be freely sourced.</p> <p>Titanium and ceramic material is specifically prohibited.</p> <p><b>Tarmac specification – Rear calipers; TBA</b></p>
803		<b>FP</b>	<p><b>Gravel specification - Front discs / mounting bells;</b> are free as to make and design provided the following conditions are respected;</p> <ul style="list-style-type: none"> <li>- One-piece Series parts are authorised.</li> <li>- Discs (rotors) and mounting bells (hats) must be commercially available mass-produced parts from a recognised brake components manufacturer.</li> <li>- Maximum diameter of 300 mm / minimum thickness of 28 mm.</li> </ul>

			Parts must come from a large scale production catalogue or from a competition parts catalogue. <b>Tarmac specification – Rear discs / mounting bells; TBA</b>
803		<b>FP</b>	<b>Gravel specification - Rear discs / mounting bells;</b> are free as to make and design provided the following conditions are respected; <ul style="list-style-type: none"> <li>- One-piece Series parts are authorised.</li> <li>- Discs and mounting bells (hats) must be commercially available mass-produced parts from a recognised brake components manufacturer.</li> <li>- Maximum diameter of 300 mm / minimum thickness of 28 mm.</li> </ul> Parts must come from a large scale production catalogue or from a competition parts catalogue. <b>Tarmac specification – Rear discs / mounting bells; TBA</b>
803		<b>FP</b>	<b>Handbrake assembly;</b> the series mechanical handbrake may be replaced with a hydraulic system.
<b>Article 8.1</b>			<b>Steering system:</b>
804		<b>FP</b>	<b>Steering wheel;</b> free as to make and design provided it is a commercially available part.
		<b>FP</b>	<b>Steering column;</b> free as to design and mounting provided the sum of its parts are of series origin and/or commercially available mass-produced parts from a recognised steering components manufacturer.  Any column adjusting system must be locked and must be operated only with the use of tools.  Any steering lock system shall be removed.
		<b>SP/FP</b>	<b>Steering rack assembly (housing / rack / rods and rod ends);</b> shall be in compliance with the following provisions; <ul style="list-style-type: none"> <li>- It must be either a series part from a series production car or a commercially available unit mass-produced by a recognised steering components manufacturer,</li> <li>- It shall be mounted on the 'control part' front subframe at the locations provided,</li> <li>- It is authorised to modify or add rack bar supports on both ends of the casing,</li> <li>- It is authorised to modify the casing for the sole purpose of fixing to the subframe.</li> </ul>
		<b>FP</b>	<b>Power assistance;</b> is authorised, either hydraulic or electric provided the parts are from a series production car or are commercially available mass-produced units from a recognised steering components manufacturer,  <b>Steering cooling device;</b> is authorised and may be freely sourced.  <b>Bulkhead / firewall opening;</b> A new position and a new opening may be introduced for the steering column.
<b>Article 8.2</b>			<b>Wheels and tyres:</b>

801		<b>FP</b>	<p>The design and make of the wheel rims is free although the following dimensional specifications are controlled as follows;</p> <p><b>Gravel specification –</b></p> <ul style="list-style-type: none"> <li>- Diameter: 15 inch only</li> <li>- Width: up to 7.0 inch</li> <li>- ET: 25</li> </ul> <p><b>Tarmac specification –</b></p> <ul style="list-style-type: none"> <li>- Diameter: TBA</li> <li>- Width: TBA</li> <li>- ET: TBA</li> </ul> <p><b>Tyre specification will be detailed in the Series Articles issued by MotorSport NZ (ASN) on an annual basis.</b></p>
<b>Article 9.0</b>			<b>Bodyshell – General conditions:</b>
900		<b>CP1</b>	<p><u>Fabrication of an NZ4 bodyshell shall only be performed by an approved constructor or by another party under the approval / supervision of MSNZ Technical (ASN).</u></p> <p>The Series Production bodyshell may only be modified for the following reasons and as specifically detailed hereunder;</p> <ul style="list-style-type: none"> <li>- To enable the installation of the safety cage,</li> <li>- To enable fitment of the engine / transmission and ancillary components,</li> <li>- To enable fitment of the 'control part' front and rear subframes,</li> <li>- To enable fitment of the 'control part' suspension turrets (towers),</li> <li>- To provide clearance for the drive-line and suspension elements,</li> <li>- To enable fitment of the fuel tank,</li> <li>- To enable fitment of the body kit, and</li> <li>- Removal of unused accessory supports and trims.</li> </ul> <p>The following modifications to the series production bodyshell are solely entrusted to approved constructors who shall utilise the 'control bodyshell jig' (to assure chassis uniformity / geometry) and perform any necessary modifications / fabrication to enable fitment of the bodyshell 'control parts' (kit) as detailed below.</p> <p>The weight of an NZ4 bodyshell thus modified shall weigh no less than 350kg. For the purpose of establishing this weight the bodyshell comprises the following; bodyshell, safety cage, front and rear guards.</p> <p><b>Each completed NZ4 bodyshell shall be subject to inspection and approval by MSNZ Technical prior to an ASN Logbook / Passport being issued.</b></p>
900		<b>CP1</b>	<p>The Series Production bodyshell shall be modified to incorporate the following 'control parts' (kit);</p> <ul style="list-style-type: none"> <li>- 2x front suspension turret (tower)</li> <li>- 2x rear suspension turret (tower)</li> <li>- 1x front subframe (longitudinal engine orientation), or</li> <li>- 1x front subframe (transverse engine orientation), and</li> <li>- 1x rear subframe.</li> </ul> <p>The location of the front and rear suspension turrets, in relation to the series bodyshell, shall be established utilising the 'control NZ4 jig' (<b>refer Build Specification Manual</b>).</p>

			<p>The location of the front and rear subframes, in relation to the series bodyshell, shall be established utilising the 'control NZ4 jig' (refer Build Specification Manual).</p> <p>All the additional mounting points on the series bodyshell must be reinforced so that, under all circumstances, they can withstand the loads caused by the modifications to the suspension, <u>independently of the safety cage</u>.</p> <p>New front and rear inner wheel arches shall be fabricated that attach to the 'control part' suspension towers and extend laterally to meet the widened guards. However, within the context of the freedom of the wheel arch, it is permitted to partially cut the upper side rail at the level of the wheel arch. This cut-out side rail must be reconstituted in such a way as to ensure that the resistance of the car in case of impact is at least equal to the original resistance.</p> <p>The lower side rail may be modified so as to allow the half-shaft to travel. The modification must be limited to an area 25 mm high by 60 mm wide seen from the side; refer Build Specification Manual. In all cases, this modification must be approved by MSNZ Technical (ASN) and detailed in the vehicles homologation form.</p> <p>In both cases, the structural resistance of the parts which have been modified must be recreated.</p> <p>The outer wheel arches may be modified in order to house the wheels authorised.</p> <p>Localised modifications of the bodyshell are authorised for removing unused accessory supports and trim.</p>
			<b>Doors:</b>
		<b>SP</b>	<p>The series doors (front and rear) may be modified, solely for the following reasons;</p> <ul style="list-style-type: none"> <li>- Only to enable the fitment of <b>side protection foam</b>, the interior part of the door frame may be modified including the removal of any series intrusion beams.</li> <li>- Localised modification of the rear doors is authorised to allow the passage of the wheel.</li> </ul>
		<b>FP</b>	<p>Interior door trim panels shall be fitted, the design being free (6-ply of carbon or carbon-Kevlar).</p> <p>Any centralized door locking system shall be removed.</p>
			<b>Lateral side protection:</b>
	<b>N</b>		Lateral side protection is highly recommended – refer specification below.
	<b>R</b>	<b>CP1</b>	<p>Lateral side protection is mandatory for Regional Approval.</p> <p>The installation of side protection foam minimum volume of foam to be 60L (Refer Build Specification Manual).</p>
<b>900</b>			<b>Jacking / Stand support points:</b>
		<b>FP</b>	Jacking points may be added, strengthened and/or moved in the bodyshell sill panels.
			<b>Transmission tunnel / central floor pan:</b>
		<b>CP1</b>	<p>The central transmission tunnel / floor may be modified. The dimensions of the fabricated tunnel must be sufficient only to allow the passage of the transmission and the exhaust line (refer Build Specification Manual for dimensions).</p> <p>The minimum thickness of all the steel sheet replacing the original steel sheet is 1.2 mm.</p>
			<b>Rear floor pan:</b>

		<b>CP1</b>	The rear part of the interior floor may be modified by removing the spare wheel housing and adding a plane steel sheet with some beading reinforcements in its place.  The minimum thickness of all the steel sheet replacing the original steel sheet is 1.2 mm.
<b>901</b>			<b>Safety cage:</b>
		<b>CP1</b>	The safety cage must be homologated by MSNZ Technical (ASN) and is a fundamental part of the bodyshell approval / homologation.  The safety cage shall not be modified or changed in any way, shape or form from the design as prescribed in the cars Homologation Form & Logbook/Passport.
			<b>Body Kit:</b>
		<b>CP1</b>	A body-kit will be created (in consultation with MSNZ Technical (ASN) for the first of each car (model) approved under these regulations.  The body-kit shall comprise of the following parts which shall be described / detailed in the cars homologation form;  <ul style="list-style-type: none"> <li>- Front bumper</li> <li>- Rear bumper</li> <li>- Front guards (LH and RH)</li> <li>- Rear guards (LH and RH) including rear door extensions</li> <li>- Side skirts</li> <li>- Rear aerodynamic device (rear spoiler / wing assembly)</li> </ul>
<b>900</b>		<b>CP1</b>	<b>Front bumper;</b> The basic shape of the series front bumper (central section) must be retained, although the following is authorised;  <ul style="list-style-type: none"> <li>- The bumper may be widened in order to align with widening of the front guards,</li> <li>- The series grille may be replaced with wire mesh,</li> <li>- Additional openings may be made in the bumper together with the side elements of the front wings, but the total surface of openings in the protective moulding must be no more than 2500 cm<sup>2</sup>. The openings must not affect the structural integrity of the bumper,</li> <li>- The material shall be that of the series part and/or fibreglass,</li> <li>- The minimum weight of the front bumper is 4.5 kg (except if the original bumper is kept),</li> <li>- The lower part of the front bumper may be detachable. No element of this detachable part may be more than 100 mm in height and protrude beyond the upper part, when seen in vertical projection, and</li> <li>- New fastenings may be created to enable ease of removal / replacement.</li> </ul> It is permitted to remove the original mounting / crash protection parts situated between the series bumper and the bodyshell.
		<b>CP1</b>	<b>Rear bumper;</b> The basic shape of the series rear bumper (central section) must be retained, although the following is authorised;  <ul style="list-style-type: none"> <li>- The bumper may be widened in order to align with widening of the rear guards,</li> <li>- The material shall be that of the series part and/or fibreglass,</li> <li>- Replacement of series removable decorative features with a flat surface forming an integral part of the rear bumper,</li> <li>- A modification of the original cut-out for the exhaust, or to create a 100 cm<sup>2</sup> cut-out, is authorised, and</li> <li>- New fastenings may be created to enable ease of removal / replacement.</li> </ul> It is permitted to remove the original mounting / crash protection parts situated between the series bumper and the bodyshell.
<b>900</b>		<b>CP1</b>	<b>Front guards;</b> The basic shape of the front guards (upper section) must be retained, although the following is authorised;  <ul style="list-style-type: none"> <li>- The guard may be widened in-line with the wider wheel-track created ... This increase may be obtained by means of an extension or a new part may</li> </ul>

			<p>be created.</p> <ul style="list-style-type: none"> <li>- The material shall be that of the series part and/or fibreglass,</li> <li>- The maximum width between the guards is 1820mm (measured on the front axle centre-line),</li> <li>- No additional air intakes or outlets are authorised, and</li> <li>- Additional aerodynamic elements are not authorised.</li> </ul> <p><b>CP1 Rear guards;</b> The basic shape of the rear guards (upper section) must be retained, although the following is authorised;</p> <ul style="list-style-type: none"> <li>- The guard may be widened in-line with the wider wheel-track created ... This increase may be obtained by means of an extension or a new part may be created.</li> <li>- The material shall be that of the series part and/or fibreglass,</li> </ul> <p>General conditions; the guards must cover the whole of the complete wheel in radial projection; this means that the upper part of the wheel/tyre assembly, located vertically over the wheel hub centre, must be covered by the bodywork when measured vertically.</p> <p><b>CP1 Side skirts;</b> of free design are authorised provided they follow the shape of the original bodywork.</p>
			<b>Rear aerodynamic device:</b>
900		<b>CP1</b>	<p>The series part may be retained or replaced with an alternative device respecting the following conditions;</p> <ul style="list-style-type: none"> <li>- Only a single device is authorised which must be made in one single piece (a single profile and no adjustment flap), and must be straight in all its dimensions.</li> <li>- The device must be rigid and offer no possibility for the penetration of air (groove, hole, opening, etc.).</li> <li>- The device must be totally contained within the frontal projection of the car (excluding any side mirrors).</li> <li>- The side plates may extend beyond 110 cm, when seen from the front, but must not generate any aerodynamic force.</li> <li>- The wing will be checked with the car horizontal.</li> <li>- With the exception of the supports, it must be made from fibreglass.</li> </ul>
			<b>Other panels:</b>
		<b>SP</b>	<p>The series <b>bonnet</b> shall be retained although it may be internally modified to enable fitment of the engine / engine ancillaries.</p> <p>Cut-outs may be introduced under the following conditions;</p> <ul style="list-style-type: none"> <li>- They respect a maximum surface area of 1000 cm<sup>2</sup></li> <li>- They have fine mesh fitted.</li> <li>- A plastic part serving as trim may be added of maximum height in relation to the bonnet being 15 mm.</li> </ul> <p><b>SP</b> The series <b>boot lid / tail gate</b> shall be retained.</p>
			<b>Front upper cross-member (radiator support):</b>
		<b>CP1</b>	<p>The upper front cross-member may be modified (between the headlamps of the car) to enable fitment of the engine / engine ancillaries provided this does not affect the rigidity of the chassis structure. Additionally, the cross-member may be replaced with a different support.</p>
			<b>Bodyshell – interior:</b>
			All of the series model (aesthetic) <b>interior trim</b> may be removed including carpets and sound-deadening materials.
			<b>Front and rear bulkheads:</b>

		<b>FP</b>	For 2 and 3 volume cars the front bulkhead must provide an air-tight and fluid-tight seal between the engine and interior. For 3 volume cars, additionally a rear (boot compartment) bulkhead may be fitted.
<b>901</b>			<b>Dashboard / Instruments:</b>
		<b>SP</b>	The series dashboard may be modified [but not replaced] although the general shape and appearance of the original must remain unchanged. The anchorage points may be modified / added to for the sole purpose of installing the safety cage. The trim situated below the dashboard and which is not a part of it may be removed.
		<b>SP/FP</b>	The series instruments are authorised, or instruments may be freely sourced provided 'on-road' (Warrant of Fitness) compliance is maintained.
		<b>FP</b>	Supplementary panels for instruments and/or switches are authorised.
<b>901</b>			<b>Heating / Air conditioning system :</b>
			The series heating / AC system may be removed in which case an electric demist system or similar system must be retained. <b>Note:</b> An effective method of demisting the windscreen must be maintained.
<b>902</b>			<b>Front windscreen and wiper mechanism:</b>
		<b>SP/FP</b>	The series windscreen is authorised or a commercially available replacement glass windscreen is authorised under the following conditions; <ul style="list-style-type: none"> <li>- The replacement screen must be of laminated glass construction.</li> <li>- The replacement screen must be certified for road use with an indelible marking as proof.</li> <li>- The replacement screen must weigh no less than the series screen.</li> <li>- The replacement screen may incorporate hot wire elements for demisting.</li> </ul>
		<b>FP</b>	The series (windscreen) wiper motor and mechanism may be modified (but not the sweep across the windscreen) to enable fitment of the safety cage. The rear wiper may be removed.
<b>901</b>			<b>Door windows:</b>
		<b>SP</b>	The series (door) windows may be retained, in which case their operating mechanisms must also remain operable.
		<b>FP</b>	Alternatively, polycarbonate (door) windows are authorised under the following conditions; <ul style="list-style-type: none"> <li>- The material must retain the original shape of the series part and shall have a minimum thickness of 3.8 mm.</li> <li>- Openings (with additional sliding windows) may be incorporated into the main window.</li> <li>- The whole window must be able to be removed (in an emergency situation) without the use of tools.</li> </ul>
			<b>Side and rear windows including any rear quarter panel windows:</b>
		<b>SP/FP</b>	The series windows are authorised or replacement polycarbonate windows are authorised under the following conditions; <ul style="list-style-type: none"> <li>- The material shall have a minimum thickness of 3.8 mm.</li> <li>- They must be able to be removed without the use of tools.</li> <li>- They must retain the original shape of the series part.</li> </ul>
			<b>Underbody protections / Mud-flaps:</b>

App J-253		<b>FP</b>	The fitting of underbody protections is authorised under the following conditions; <ul style="list-style-type: none"><li>- They are made from an authorised material.</li><li>- They are designed to be removable.</li><li>- They are designed exclusively and specifically to protect the following parts; Engine, Radiator, Suspension, Gearbox, Transmission, Fuel tank, Steering, Exhaust and Extinguishers.</li></ul>
		<b>FP</b>	Mud-flaps shall be fitted to all wheels that cover the whole width of the tyre [when viewed from the rear of the vehicle] and a ground clearance between 50 mm and 100 mm [when the vehicle is stationary]. The material shall be flexible and have a minimum thickness of 4.0 mm.
			<b>END</b>