

**ASSOCIATION OF
AUTHORISING
BODIES**



RULES & REGULATIONS

2026 EDITION

JUNIOR SPECIAL



"The Association reserve the right to alter/amend the Rule Book as required, and that the Association has the right to review and amend any Class or Construction Rules at the end of each racing year."

**VALID FROM JANUARY 2026
UNTIL FURTHER NOTICE**

ALL PREVIOUS EDITIONS ARE INVALID

NEW REGULATIONS ARE MARKED #

IT IS THE RESPONSIBILITY OF THE DRIVER/CONSTRUCTOR TO ENSURE THAT ALL VEHICLES CONFORM FULLY TO THE REGULATIONS AND RULES CONTAINED WITHIN THIS RULEBOOK.

IF THE REGULATIONS AND RULES DO NOT STATE THAT "YOU CAN DO IT" THEN IT MUST BE PRESUMED THAT IT CANNOT BE DONE.

JUNIOR SPECIAL

**FOR GENERAL BASIC CONSTRUCTION RULES (i.e., Basic requirements for all class of “Special” vehicle).
SEE SEPARATE RULE BOOK –SPECIALS – GENERAL.**

JUNIOR SPECIAL

INDEX	PAGE
CLASS SPECIFICATION.	1
1 Statement of Conformity	1
2 General	1
3 Technical Notes	1
4 Engine Specification	1
5 Engine Sealing & Capacity Labelling	5
6 Engine Location	6
7 Transmission	6
8 Vehicle Dimensions & Weight	7
9 Steering	7
10 Chassis & Roll Cage	7
11 Chassis Panels	7
12 Safety Shields & Guards	7
13 Protection	7
14 Suspension	8
15 Windscreen/Glass	8
16 Safety Harness	8
17 Seat	8
18 Fire Extinguisher	8
19 Vehicle Identification	8
20 Electrical & Instruments	8
21 Fuel	9
22 Cooling Systems	9
23 Brakes	9
24 Wheels	10
25 Tyres	10
26 Exhaust & Silencing	10
27 Ballast	11
28 Vehicle Check Sheet	11
FIGURES	17

JUNIOR SPECIAL.**A single seat-racing rear wheel drive vehicle.****Constructed in accordance with NASA specified construction regulations for Autograss Racing on an unsealed surface only.****The engine, transmission/gearbox and certain suspension components specified as being provided from a named donor vehicle.****1. STATEMENT of CONFORMITY.**

Only methods of construction and modifications as listed are permitted. Any further modifications, other than those permitted, are prohibited. Any modifications other than those listed within the Vehicle Construction Rules are specifically excluded.

i.e., If the rules do not “say” that a modification is permitted then it is not allowed.

2. GENERAL**2.1 Standard Production Components.**

Where the use of standard production components is a requirement or specified by the “Junior Special” Vehicle Construction Rules & Regulations.

NASA reserves the right to have any part removed from a competitor’s vehicle and retain that part for examination to ensure compliance with the original donor vehicle manufacturers standard production details. Such components may be returned to the competitor concerned or confiscated at the discretion of the NASA Chief Scrutineer.

NASA reserves the right to designate the information reference source and the method of component checking.

Note.

The “Vehicle Check Sheet” data and other designated information source will be used in conjunction with the particular vehicle Palgrave / Glasses Guide Technical Services Data Sheet as a reference when checking the eligibility and legality of the vehicle and or any of its components.

2.2 Permitted Donor Vehicle.

Vauxhall Corsa 3dr/5dr hatchback saloon 1196cc (1.2 Litre).

Citroen C1 3dr/5dr hatchback saloon 998cc 12V VVTi.

Peugeot 107 3dr/5dr hatchback saloon 998cc 12V VVTi.

Toyota Aygo 3dr/5dr hatchback saloon 998cc 12V VVTi.

The C1, Peugeot 107 and Toyota Aygo vehicles were produced as a collaboration between Citroen, Peugeot and Toyota. Whilst the majority of basic components are common, there are differences in certain items. Each vehicle must be wholly as originally manufactured. The mixing of components between each manufacturers model of vehicle prohibited

2.3 Novice Driver Identification.

All Novice drivers i.e., those new to the class and or Junior Drivers during 1st season racing; it is a requirement for the vehicle to have affixed at the vehicle rear a clear and easily read “Novice Identification sign/symbol consisting of an 150mm high (6”) X on a white/yellow background.

3. TECHNICAL NOTES – As Specials - General.**4. ENGINE****4.1 Permitted Engine.**

Vauxhall Corsa 1196cc (1.2 Litre) SOHC engine - 1993 to 2000.

Bore – 72.00mm.

Stroke – 73.40mm.

12 NZ – Distributor ignition system. Without catalytic. converter. Compression ratio 9.1:1.

C12 NZ – Distributor ignition system. With catalytic converter. Compression ratio 9.1:1.

X 12 SZ - Distributor less ignition system (Coil Pack). With catalytic converter & EGR System. Compression ratio 10:1.

Citroen C1 998cc 12V. 1st June 2005 and before 1st January 2013.

Peugeot 107 998cc 12V. 1st June 2005 and before 1st January 2013.

Toyota Aygo 998cc 12V. 1st June 2005 and before 1st January 2013.

N.B. NASA is considering a future introduction of additional vehicle’s engine & gearbox & “front” suspension. The vehicle engine & gearbox & “front” suspension type to be assessed via trials by designated vehicles.

4.2 Engine Specification.

i. The engine must remain as per the donor vehicle manufacturer’s original specification.

ii. All parts used must comply with the permitted vehicle manufacturer’s original specification and permitted vehicle’s Glasses Guide Technical Services Data Sheet (T.S.D.). The donor vehicle manufacturer’s parts specifications and T.S.D. sheet will be used as a reference when checking the eligibility and legality of the engine and transmission/gearbox and their components.

iii. Standard production originals and NASA Scrutineers Committee permitted replacement engine/gearbox components only must be used.

iv. The interchanging of any unspecified components between the specified donor vehicle manufacturer’s engine & gearbox and any other engine & gearbox is prohibited.

v. The modification or alteration of any part or component using any standard production parts to alter its working design is prohibited.

4.3 Pistons & Cylinder Overbore.

The cylinder oversize bore or re-bore where permitted is on the manufacturer’s original engine size, as fitted to the make and model of the permitted donor vehicle.

Vauxhall 1196cc engine:

Standard replacement or NASA Scrutineers Committee permitted pistons only are permitted.

A maximum of + 0.500 mm oversize bore is permitted.

NASA Scrutineers Committee Permitted Pistons.

Vauxhall 1196cc engine only.

"King Pistons" C12NZ – 12NZ Dia. 72.00 +0.50. – 18-3010183.

C1, 107 & Aygo Engine.

Standard size pistons and liners only are permitted.

Standard size replacement pistons and liners only are permitted.

It is not permitted to overbore and or fit oversize standard replacement pistons and/or liners.

4.4 Component Treatment.

Shot-peening or tuft-riding of engine components permitted.

4.5 Balancing of Components.

Vauxhall 1196cc engine.

The permitted engine's original manufacture's connecting rods, crankshaft, pistons, flywheel and clutch cover plate may be balanced.

Note.

- i. One assembly/set consisting of one connecting rod and big end cap from the same cylinder must remain as standard (Not balanced or lightened). The remaining units and components may be balanced to match.
- ii. Pistons: One Piston to remain as standard. The remaining pistons may be balanced to match. To be balanced by means of spot drilling only.
- iii. Conrods: To be balanced to manufacturers standard only. Removal of metal by spot grinding or spot drilling for "Balancing purposes" is permitted for "Little end" and "Big end cap" only. Removal of metal from "H" section part of conrod prohibited.
- iv. The crankshaft, flywheel, and clutch cover plate to be balanced by means of either-or spot grinding or spot drilling.
- v. Crankshaft webs: A minimum of one crankshaft web must remain as factory finish. Crankshaft webs must not be chamfered, radiused, narrowed, knife edged, or smoothed or polished. If, in the opinion of the scrutineer, the crankshaft has been modified during the balancing process to improve its performance in other areas then it will be deemed illegal.

C1, 107 & Aygo Engine.

After market balancing or reconditioning balancing and lightening /polishing of any components is not permitted.

4.6 Camshaft.

Vauxhall 1196cc engine.

A standard production and/or standard production replacement camshaft obtained from **either** a bona-fide Vauxhall Dealer or AE or a replacement camshaft as manufactured by a NASA specified aftermarket camshaft manufacturer only is permitted. The camshaft identification reference or code number must be retained and remain visible.

Vauxhall part ref/no: - 90444758.

AE part ref/no: - CAM453 / CKS2453 EC6111.

BGA part ref/no: - 12NZ / C12NZ / X12SZ –CS2314 / CS2314FK.

X12SZ - CS2372K.

NASA permitted camshaft:

Vauxhall 1196cc engine.

Newman Cams: - NASA JS08

C1, 107 & Aygo Engine.

Standard production OE replacement camshafts only permitted.

The Inlet and exhaust camshafts must each remain in the original standard production form and be complete with correct identifying methods and or markings.

The production or adaptation or modification of a camshaft to provide the standard valve timing and/or valve lift, but non-standard timing and/or valve lift at regular degrees of rotation is prohibited.

Cam Lift.

Vauxhall 1196cc engine.

The maximum cam lift shall be: Inlet: = 4.8mm. Exhaust: = 5.2mm.

C1, 107 & Aygo Engine.

Maximum Inlet = As standard production. Maximum Exhaust = As standard production.

Cam Belt.

Vauxhall 1196cc engine.

The cam-belt type and manufacture is Free.

C1, 107 & Aygo Engine.

As Standard Production.

4.7 Water pump.

Standard production original and replacement engine mounted water pump only permitted.

4.8 Ignition System.

Ignition Leads & Spark Plugs Free.

Distributor and Distributor less systems.

- a). The standard production Distributor and/or Distributor less (DIS) system / Electronic Control Unit (ECU) and associated sensors and Diagnostic “reader”/“interrogator” “plug in” connections (OBD port) must remain in their original standard production locations and must work. i.e., Be capable of operating when connected.

Note.

An On-board diagnostic (OBD) port must operate as standard production and be readable at all times. No device may be connected/plugged into the OBD port that has to be removed and or unplugged to enable a diagnostic reader to be connected/plugged into it.

- b). The ECU must be fitted in a readily accessible location and be mounted such that it is easily removable.
 c). The ECU shall be marked with identification showing the vehicle club prefix and vehicle number.
 d). The placing of any substance or use of devices, including electrical resistors whether within the wiring system or elsewhere, to provide false and or non-standard information to the ECU or any part of the fuel delivery control system is prohibited.
 e). For ECU's that are fitted with a vehicle immobiliser facility, the particular ECU immobiliser function **MUST** be overridden or disconnected. The method of modification to achieve this is free, provided no other function of the ECU is affected. Any and or all other ECU rewriting, remapping, chip replacement (chipping), re-soldering, removal and or re-fitting of component(s) and or performance enhancing modification are not permitted.
 f). NASA reserves the right to:
 i. Remove and retain the ECU fitted to the competitor's vehicle and retain that unit for inspection.
 ii. Remove the ECU and substitute it for NASA supplied unit for a set time period e.g., the duration of a race meeting or a stated number of races.
 iii. Remove the ECU and substitute it for a unit as used by another competitor.
 iv. Place a “Scrutineers Seal” onto the ECU for a specified period of time chosen by the Chief Scrutineer.
 g). NASA shall not be held responsible for the performance or damage of the above unit.
 h). One ECU only must be fitted at all times. The fitting of a “Spare” or “Standby” ECU is prohibited.
 i). For the Vauxhall Corsa 1196cc the Distributor less (DIS) GM Multec Electronic Control Unit (ECU) system must be retained.
 j). The fitting of a distributor to a “Distributor less” cylinder head is prohibited.
 k). “Rev Limiters” must operate at **6250** rpm maximum.

Note.

Competitors are strongly advised to ensure that their “rev limiters” are set below the stated maximum rpm as their own instrumentation at “Home”, “Workshop” or elsewhere may provide a different reading to the NASA designated checking instruments. In the event of any discrepancy; the RPM reading as per the NASA designated instruments will be used as the datum. RPM readings found to be above the stated maximum will result in disqualification and a report for disciplinary action.

C1, 107 & Aygo Engine.Ignition System.

- a). The original standard production Electronic Engine Management Control Unit (ECU) **must** be substituted by a NASA supplied ECU. The NASA ECU shall be obtained from the NASA Chief Scrutineer or other designated NASA official. When fitted the NASA ECU shall be connected to the original standard production correct engine and electrical system sensors. E.g., Engine RPM, Crankshaft, Camshaft sensors etc. The adaptation of any other ECU, or sensors where they are fitted to other vehicle makes and/or models is prohibited.

Modification including disconnection and or removal and or sealing of any part of the ignition and or fuel system to prevent or enhance operation prohibited.

- b). The standard production NASA Electronic Control Unit (ECU) and associated sensors and Diagnostic “reader”/“interrogator” “plug in” connections (OBD port) must remain in their original standard production locations and must work. i.e. Be capable of operating when connected.

Note.

An On-board diagnostic (OBD) port must operate as standard production and be readable at all times. No device may be connected/plugged into the OBD port that has to be removed and or unplugged to enable a diagnostic reader to be connected/plugged into it.

- c). The NASA ECU shall be marked with identification showing the vehicle club prefix and vehicle number.
 d). The placing of or use of devices, whether within the wiring system or elsewhere, to provide false information to the NASA ECU or any part of the fuel delivery control system is prohibited.
 e). For original ECU's that are fitted with a vehicle immobiliser facility, the particular NASA ECU immobiliser function may be overridden or disconnected, provided no other function of the ECU is affected. ECU rewriting, remapping, chipping and or performance enhancing modification are not permitted.
 NASA shall not be held responsible for the performance or damage of the above unit.
 f). Ignition Leads & Spark Plugs – Free.
 g). Standard production ignition coils must be retained.
 h). Engine Rev Limit - “Rev Limiters” must operate at **6750** rpm maximum.

Note.

Competitors are strongly advised to ensure that their “rev limiters” are set below the stated maximum rpm as their own instrumentation at “Home”, “Workshop” or elsewhere may provide a different reading to the NASA designated checking instruments. In the event of any discrepancy; the RPM reading as per the NASA designated instruments will be used as the datum. RPM readings found to be above the stated maximum will result in disqualification and a report for disciplinary action.

Note.NASA reserves the right to:

- i. Remove and or retain the ECU fitted to the competitor's vehicle and retain that unit for inspection.
 ii. Remove the NASA ECU and substitute it for an alternative NASA supplied unit for a set time period. e.g., the duration of a race meeting or a stated number of races.
 iii. Remove the ECU and substitute it for a unit as used by another competitor.

- iv. Place a "Scrutineers Seal" onto the ECU for a specified period of time chosen by the Chief Scrutineer.
- v. Connect a "reader" to read and or check ECU settings.
- vi. NASA shall not be held responsible for the performance or damage of the above unit.

4.9 Cylinder Head.

The cylinder head **MUST** be the correct type for the engine involved.

Chemical, decarbonising fluid and or "Ultrasonic" clean only permitted. "Sodium Bicarbonate (Soda Blasting)" cleaning permitted.

- i. Reconditioning of the cylinder head and its associated components must be carried out in accordance with the original manufacturer's recommendations and accepted "reconditioning and repair" practise only.
Reconditioning and or removal of metal that is carried out to the extreme will result in components etc; being deemed as outside the Class regulations and thus illegal.
Absolute minimum cylinder head thickness: **Vauxhall engine = 94mm. C1, 107 & Aygo = 112.5mm**
- ii. The inlet port and exhaust port surfaces, within the cylinder head, must remain as manufacturers original standard production finish and dimensions. See Fig. 37.
The "cleaning" or "smoothing" of port surfaces by removing metal or polishing of the original standard production finish via the use of wire brushes and or flap wheels and or grinding stones and or any other method, including refinishing a modified port, is not permitted.
Chemical, decarbonising fluid, "Ultrasonic" clean and or "Sodium Bicarbonate (Soda Blasting)" cleaning only permitted.
- iii. Valves and Valve Inserts.
Vauxhall Engine.
A "3 angle cut" to valve & valve seat permitted.
Note.
 - a). The top face of any valve insert fitted must be below or in line with the combustion chamber face.
 - b). The depth of the valve insert must be not greater than 6mm.
 - c). Maximum throat diameter of inlet valve inserts. – See Check Sheet.
 - d). The cylinder head valve throat must remain as standard production diameter and "As cast" finish.
 - e). When fitting a replacement valve insert it is not permitted to machine the valve throat beyond the depth of the new valve insert.
There must be a minimum of 1mm un-machined depth at the internal lowermost part or base of the insert.
 - f). If a valve has 3 angle cut as standard then the modification or machining to less than or more than 3 angles is prohibited.
 - g). The "valve seat" must remain within the "area" and or "boundary limit" of the original standard valve seat.
 - h). For both valve and insert "valve seat" the border line or edge between each individual "angle cut" must be clearly visible. The "merging" or "blending" and or joining together of the separate angle cut surfaces is prohibited.

C1, 107 & Aygo Engine.

Replacement valve seats are not permitted.

Valve seat and valve head must remain as original manufacture. Reconditioning and or alterations from standard production finish are prohibited

iv. Valve Head Diameter.

See Check Sheet.

v. Air Restrictor Plate – Location, Size & Thickness.

i- Vauxhall Engine. - Not required.

ii. C1, 107 & Aygo Engine.

All the air mixture into the injector system throttle body must pass through an easily removable SINGLE metal restrictor plate.

This restrictor plate must be circular and of a thickness of 10mm +/- 0.2mm.

It must be of a "Drop In", "Washer" circular type that it of a tight fit into the main air entry orifice of the standard production throttle body.

It must have a centre orifice/hole with a maximum parallel bore diameter of size 20mm through the entire thickness of the restrictor plate. See Fig. 38a & 38b.

Note:

- a). A "Drop In", "Washer" type Restrictor Plate that fits into a separate receptacle adaptor or plate is not acceptable.
It is not regarded as "readily accessible".
- b). There must be no secondary air delivery device other than the standard production entry orifice into the throttle body.
- c). NASA reserves the right to amend the restrictor plate and or orifice size and location at any time.
- d). NASA nominated restrictor plate manufacturer/supplier:
D&M Design Fabrications Ltd, North Close Farm, Kirby Malzeard, Rippon HG4 3QE.
Tel: 01765 522222.
NASA reserves the right to amend the nominated restrictor manufacturer/supplier at any time

vi. C1, 107 & Aygo Restrictor Plate Sealing.

The Restrictor plate as described in Rule v. ii. MUST have provision for the fitting of at least one readily accessible Scrutineers seal. A minimum readily accessible single 1.2mm (1/16") diameter hole must be pre-drilled in the restrictor plate holding fixing - cap screw/bolt horizontally or vertically and either or both of the throttle body fixing bolts to allow for the fitting of a scrutineer's wire seal. See Fig 38b.

vii. C1, 107 & Aygo Restrictor Plate Fasteners.

A minimum of one 6mm throttle body to restrictor plate retaining/fastening cap screw/bolt or stud must be fitted. This to be via a threaded hole in the vertical edge of the restrictor plate and a drilled hole through the throttle body entry orifice side and the air filter retaining push fit gaiter via the gap in the gaiter metal retaining ring. See Fig 38b.

Where the method of fixing is by means of a stud & locking nut, the hole must be located above the retaining nut, but below the top surface of the stud.

Where the method of fixing is by a cap screw, the hole must be located through one both edges of the internal hexagon head of the cap screw.

It must be possible for a single wire seal to be easily passed through each of the holes in the restrictor plate fastener and to be joined via a seal, such that the fitting of the wire seal prevents removal and/or substitution of the original Restrictor.

4.10 Air Box & Filter Box & Air Filter.

The standard production air box must be retained in its entirety and remain in its standard production form, without any modification, and fitted in its standard production location on the top of the Fuel Injection Unit.

All the air must enter the air filter/cleaner casing via the standard production entry orifice and associated air inlet ducts only.

Vauxhall Corsa 1196cc – Air Box reference number:

GB 90324 005 – PPT20 – Mann 3909168901.

Air Entry Pipe/Ductwork.

A “mesh” or “lattice” may be fitted at or near the open-air entry orifice minimise track debris entry

Vauxhall Engine.

All the air must enter the air box via the standard production single 55mm diameter entry orifice.

Air intake/inlet pipe/ducts up to the casing stub free.

C1, 107 & Aygo Engine.

The air intake/inlet pipe/ducts from the casing stub to its open-air entry orifices must be retained in its standard production form and location

Air Filter type and location.

Free, however it must be fitted such that it is to the rear of the roll cage uprights.

4.11 Fuel Injection Unit/Throttle Body.

The Fuel Injection Unit/Throttle body must be fitted with a throttle return spring of sufficient size, strength and movement such that the throttle closes once the ‘accelerator’ or ‘throttle’ pedal is released. See Rule 10.10

Vauxhall Engine.

Type number and size is restricted.

i. The standard production GM Fuel Injection Unit/Throttle body must be retained in its standard production form and location/position.

The 1196cc (1.2) standard production throttle body only is permitted: - See Check Sheet.

ii. All the air must enter the air box via the standard production single 55mm diameter entry orifice.

Note.

Fuel Injection Unit depending upon its location may be required to have protection bars fitted. See PROTECTION – Rule 20.9.

C1, 107 & Aygo Engine.

The standard production Fuel Injection Unit/Injector/Throttle body must be retained in its standard production form.

Modifications to and or removal of any part of Fuel Injection Unit/Injector/Throttle body except for securing the restrictor and seal fitting prohibited. The adaptation of any other systems, where they are fitted to other vehicle makes and/or models, including fitting of non-standard injector is prohibited.

4.12 Engine Fuel System.

i. The standard production engine fuel system shall be retained and remain in its standard production form.

ii. Fuel Sensors, including inlet/exhaust manifold items and their wiring and connectors/connections shall be retained and remain in their standard production location and form.

iii. Vauxhall Corsa 1196cc - The Multec single-point fuel injection system must be retained.

C1, 107 & Aygo Engine - The standard production multiport Fuel Injection system must be retained.

iv. Inlet Manifold.

The standard production inlet manifold shall be retained and remain in its standard production form.

v. Fuel Pump – Type and location – Restricted. See Rule 21.2.

vi. Octane Coding plug. – Type – Restricted.

Vauxhall Engine.

The standard production 1196cc series engine plug must be fitted. Either: 91 RON or 95 RON.

4.13 Engine Oil System.

i. The engine oil pump must remain as standard production.

ii. The fitting of an oil breather catch tank permitted.

iii. The fitting of an oil cooler is permitted.

v. The oil pick-up pipe may be repositioned and/or modified to function in the event of oil surge.

vi. The fitting of a sump oil baffle plate or plates permitted to minimise oil surge.

vii. The fitting of an oil windage tray and or crankshaft scraper prohibited.

viii. Oil Filter – Protection - See Rule 22.4.

5 **ENGINE SEALING & CAPACITY LABELLING.**

5.1 Engine Sealing.

The engine must have, available at all times, provision for the fitting of at least one readily accessible scrutineer’s wire seal/tag, such that the fitting of the wire seal/tag prevents access to internal engine components.

A minimum of two adjacent engine cylinder head retaining studs or bolts must have a single 1.2mm (1/16”) diameter hole pre-drilled in each of them.

- i. Where the method of cylinder head retention is by means of stud and locking nut the hole must be located above a cylinder head retaining locknut but below the top surface of the stud. (See Fig 1a. & 1b.).
- ii. Where the method of cylinder head retention is by means of a bolt the hole must be located through two adjacent edges of the hexagon head of the bolt.
- iii. Where cylinder head retaining studs and bolts are inaccessible, then a single 2mm (1/16") diameter hole must be pre-drilled in two accessible parts or areas of the engine.

6 ENGINE LOCATION.

6.1 Engine Location and Mountings.

The engine must be positioned anywhere to the rear of the rear roll cage uprights in a transverse format with the engine block forward of the drive shafts.

The engine must be within the chassis structure. i.e., there must be chassis space-frame structure steel tube bars to the front, both sides and rear of the engine and transmission unit.

As a rule of thumb in the event of a potential roll over or side/rear impact the chassis structure must be such that it is struck initially. It also must contain the engine/gearbox unit within the chassis structure in the event of any mounting's failure.

"Engine mounting brackets"

Vauxhall Engine.

The location of the "Engine mounting brackets" in relation to the vehicle space-frame chassis must be such that it/they shall be no further forward than the front face of the rear roll cage upright. See Fig. 34a & 34b.

Engine to "Engine mounting" mounting is free i.e., "Solid" type engine mountings permitted.

C1, 107 & Aygo Engine.

The location of engine must be no further forward such that an imaginary line from offside to nearside has the whole line centre datum point being not less than 140mm @ 90 degrees, between the rear roll cage uprights and the top right-hand side (when viewed from offside) timing chain cover fixing bolt. See Fig. 35a, 35b & 35c.

"Angling" of the engine such that the whole datum line centre is not at 90 degrees to the rear roll cage uprights prohibited.

Engine to "Engine mounting" mounting is free i.e., "Solid" type engine mountings permitted.

Locating the engine rearwards at a distance greater than the 140mm datum centre line permitted.

7 TRANSMISSION.

7.1 Permitted Transmission/gearbox. - See Check Sheet.

7.2 Transmission/gearbox – All.

The transmission or gearbox must remain as per the manufacturer's original specification, complete with all gears retained, including reverse gear.

i. Gear Selector mechanism.

A single gear lever must be fitted to control the operation of the transmission system "Gear change" mechanism. Modifications to gear selector rod & rod housing free.

Steering wheel mounted or operated gear change devices are prohibited.

ii. Gear Ratios. - See Check Sheet.

iii. Differential. - The differential must be free revolving at all times. LSD/Gripper and or similar types prohibited.

iv. Differential Turning Torque.

The differential must have a turning torque of a maximum of 3 lb/ft (36lbf/in) (0.34Nm) at all times, when measured at the wheel hub. i.e. When the transmission is set to neutral and the nearside wheel and tyre raised off the ground whilst the offside wheel and tyre assembly remains on the ground, and vies-versa, then when a torque wrench is applied onto the wheel hub nut the maximum turning torque of the differential and drive-shaft assembly must not exceed the stated maximum regardless of the temperature of the unit.

v. Crown-wheel & Pinion (CWP) Ratio. - See Check Sheet.

vi. Constant Velocity (C.V.) Joints & Drive Shafts.

As original standard production.

Standard production original and replacement C.V. joints only permitted.

vii. Drive Shafts.

Standard production original and replacement drive shafts only permitted.

C1, 107 & Aygo Engine.

The transmission or gearbox must be:

"Manual"

The Manual operating system must be as standard production including cables.

Or

Multi-Mode type (MMT) reference:

Toyota - Multi-Mode.

Citroen – SensorDrive.

Peugeot - 2-Tronic.

The MMT operating system must be as standard production including materials complete with transmission ECU, actuators, sensors and switches.

7.3 Transmission Location – Restricted.

The transmission must be located such that it is connected to the engine as per original manufacturer's specification.

The transmission may be positioned anywhere to the rear of the rear roll cage uprights within the chassis structure, in a transverse format.

Note.

Gearbox to "Gearbox mounting" mounting is free. i.e., "Solid" type engine mountings permitted.

Vauxhall Engine - Restriction.

- i. The curved front face of the engine-mounting bracket protrudes no further forward than the rear face of the rear roll cage upright. – See Fig.34a & 34b.
- ii. The front face of the centre of the suspension tie bar bracket protrudes no further forward than the front face of the rear roll cage upright. – See Fig.34a & 34b.

C1, 107 & Aygo Engine.
See Rule 6.1.

7.4 Clutch.
Standard production original and replacement clutch cover & plate only permitted.

7.5 Clutch Foot Pedal.
A single clutch foot pedal must be fitted to control the operation of the “Clutch mechanism or engaging” drives to the transmission system mechanism from the engine. The use of hand operated drives prohibited.

8 VEHICLE DIMENSIONS & WEIGHTS.

8.1 Vehicle Wheelbase –Restricted.
Minimum = 1828mm (72”) (6’).
Maximum - Free provided it remains within stated Specials – General - Rule 2.4 overall dimensions.

8.2 Vehicle Weight – Restricted.
The total weight of the complete vehicle including driver at any time must be of an absolute minimum of **525 Kg.**
Note.
i. Vehicle and driver combination may be subject to a minimum weight spot check, using any NASA designated corner weight scales, at any NASA designated time, frequency, and location during a race meeting at the scrutineer’s discretion. This will be carried out by Scrutineers or other designated officiating persons.
The weighing of a vehicle and driver separately rather than as a combination is restricted and must only be carried out with the permission of the competitor’s parent/guardian.
ii. Vehicles and driver combinations found below the absolute minimum weight of 525 Kg will be immediately disqualified from the race meeting concerned and the competitor(s) will be reported for disciplinary action.
iii. A refusal to comply with a request to weigh a vehicle will result in immediate disqualification from the race meeting concerned and the competitor will be reported for disciplinary action.
iv. Competitors are strongly advised to ensure that their vehicles are above the absolute minimum weight as their own scales at “Home”, “Workshop” or elsewhere may provide a different reading to the NASA designated scales. In the event of any discrepancy the weight as per the NASA designated scales will be used as the datum.
v. NASA reserves the right to amend and or revise the minimum weight at any time.

N.B. The including of the driver weight within the overall restricted weight limit will be monitored during each racing season. NASA reserved the right to amend the overall weight limit at any time.

8.3 Vehicle ride height.
The vehicle ride height is free.
NASA reserves the right via an appointed Official and or Scrutineer to reject a vehicle ride height (too high or too low) deemed as not fit for purpose to ensure full control of the vehicle and unsuitable for the shock and stress loadings of the “Autogress racing environment”.

9 STEERING.

9.1 Steering Wheel.
A full circumference steering wheel must be used.
As Specials General – Rule 9.4.

9.2 Steering Wheel Mounted Controls. - Restricted
Steering wheel mounted controls prohibited.

10 CHASSIS & ROLL CAGE - As Specials - General.

11 CHASSIS PANELS - As Specials - General.

12 SAFETY SHIELDS & GUARDS - As Specials - General.

13 PROTECTION.

13.1 Side Protection.
For Junior Specials side bar protection is mandatory.
A “Side protection bar” to protect the driver’s compartment on nearside and offside over a minimum distance of from the rear roll cage upright to the front roll cage upright **MUST** be fitted. The side protection bar may be extended forward no further than within 50mm of the rear of the front wheel & tyre assembly and no further rearwards than within 50mm of the front of the rear wheel & tyre assembly.
Each side protection bar shall on each side of the vehicle have a mean ride height, which is to an imaginary line joining, in side elevation (i.e., when viewed from the side) the centre of the particular side front wheel with the centre of that side rear wheel. (See Specials General Fig. 10 - 13 & Fig. 30).

Note.

There must be a minimum of 3 points of connection, 2 of which must be onto the rear chassis or roll cage upright at the rear of the driver’s compartment. See Fig 12. It may be welded or bolted.

If bolted it must be bolted by means of a minimum of a single 10mm High Tensile steel bolt at each point of connection with the main chassis.

13.2 Side Protection bar construction

Side protection bars must be fit for purpose.

NASA reserves the right via a Scrutineer to reject a construction component choice due to size and ability and or capacity to provide the necessary protection.

Multiple or excessively large or oversized or "Heavyweight" protection bars may be regarded as ballast/reinforcement and prohibited.

14 SUSPENSION.**14.1 Front Suspension Type Restricted.**

Suspension components must be of metal.

"Inboard" suspension is not permitted.

The use of "Remote reservoir" and or "Piggyback" type units are prohibited.

14.2 Rear Suspension Type Restricted.

The permitted donor vehicle's complete standard production "Front" suspension bottom tie bars, bottom inner and outer track control arms, uprights/wheel hubs, and MacPherson strut must be used. The fitting of an anti roll bar is optional, however if fitted the standard production item must be used.

Suspension Legs/Struts.

i. Vauxhall Engine - A GM Vauxhall O.E. - Corsa 1200cc standard production "Struts" - Part Number GM 72119025.

Aygo/C1/107 Engine - A OE standard production "Struts" may be used.

Or for both Vauxhall and Aygo/C1/107 engine - proprietary manufactured replacement MacPherson strut (One piece without removable insert) is permitted.

If proprietary after market replacement unit is used it must not be of retail cost of more than the GM original OE replacement unit.

Standard production replacement units as manufactured by:

"KYB - Excel/Ultra", "Monroe - Original/Reflex", Bilstein "B4-22-040909" permitted.

The use of competition / motorsports derived and or uprated and or modified and/or adjustable and/or "Remote reservoir" and or "Piggyback" type units are including all non-specified Bilstein, Spax, AVO, G.max, Koni prohibited.

The piston rod diameter must be a maximum of 20mm.

ii. The use of adjustable spring platforms are prohibited.

iii. The permitted donor vehicle's standard production "Front" suspension leg/struts may be fitted with a metal "Wedge" to minimise bending. Maximum height of metal wedge 100mm. See Fig. 36.

iv. Vauxhall Engine - The Tie Bar standard production mountings must be used to fit the components to the steel space-frame fixing points. Lightening/cutting/re-shaping/modifying of the standard production "horizontal-U" shape mounting prohibited.

The design of Space-frame fixing point is free. The rear face of the centre part of the bush housing must be no further forward than the rear face of the rear roll cage upright- See Figs 34a & 34b.

Aygo/C1/107 Engine - The suspension arm incorporated mounting standard production bush must be used. The centre of the bush fixing bolt must be no further forward than 240mm from the rear face of the rear roll cage upright - See Figs. 35a & 35b.

Suspension mountings.

i. The suspension unit top mount must be as standard production and mountings to chassis must be at a single fixed point.

ii. The use of a spacer between the mounting bracket and suspension leg top mount permitted.

14.3 Rear Suspension Springs

Type and spring rating free, however they must fit onto the permitted donor vehicle's standard production "Front" suspension leg/struts.

14.4 Rear Suspension "steering arms" for nearside & offside uprights/wheel hubs.

Must be of metal. Type & mounting free.

"Rose Joints" may be fitted for track adjustment.

14.5 Rear Suspension Bushes.

Type, material and size - Free.

15 WINDSCREEN/GLASS - As Specials - General.**16 SAFETY HARNESS - As Specials - General.****17 SEAT - As Specials - As Specials - General.****18 FIRE EXTINGUISHER - As Specials - General.****19 VEHICLE IDENTIFICATION - As Specials - General.****20 ELECTRICAL / INSTRUMENTS****20.1 Battery Size and Number off - Restricted.**

A single 12 Volt battery only must be used.

20.2 Instrumentation and gauges.

Instrumentation and gauges free.

The use of an engine "Rev counter" and or "Speedometer" and their associated tachometer drive mechanisms/sensors permitted.

The use of gear change “Shift light” system(s) prohibited.
The use of “Data” and or “Data Logging” systems prohibited.

20.3 Wiring Loom.

Free.

However, the loom must incorporate all correct standard production ECU control system, temperature control and exhaust system sensors etc.

20.4 Start line “Rev Limiter”/Launch Switch

Prohibited.

20.5 Alternator & Charging system.

The standard production charging system. may be retained or removed and replaced however, an alternator must be fitted. Charging amperage free.

If the standard production alternator is retained and or replaced the alternator must remain in its standard production location and position and must “work.” Modification/lightening or removal of internal components and or removal/disconnection of drive belt prohibited.

21 FUEL.

21.1 The standard production donor engine fuel injection system must be retained.

21.2 Fuel Pump and Regulator Type – Restricted.

Vauxhall Engine.

i. The original donor vehicle fuel delivery pump may be retained or removed and replaced with an equal capacity fuel pump.

ii. Type and capacity of fuel regulator on the fuel flow pipe-work up to the Multec Injection Unit free. However, the fuel pressure must be as standard production.

C1, 107 & Aygo Engine.

The original vehicle manufacturers fitted fuel pump and regulator may be retained or removed.

Permitted alternative replacement pump to original is Either Bosch 038 (Vauxhall 2.0l cavalier) Or a Sytec FP603 (3 Bar).

Adjustable pressure type prohibited.

Permitted alternative fuel regulator to original is one that must be equal/equivalent to original with set fuel pressure no greater than original standard production fuel pressure settings.

21.3 Fuel filter.

Type and capacity of fuel filter free.

21.4 Carbon/Charcoal Canister.

C1, 107 & Aygo Engine.

The original vehicle manufacturers fitted “Evaporative carbon/charcoal canister” may be retained or removed.

If removed remaining hose connections must be blanked off with metal.

22 COOLING SYSTEMS

22.1 Water Radiator Type & Number – Restricted.

A single water-cooling radiator must be fitted.

The radiator must be of a type as fitted to a standard production road vehicle.

The repositioning of the original radiator – radiator hose connection points is permitted.

Note.

Water temperature sensors must be retained and be correctly fitted.

The placing of any substance or use of devices, including electrical resistors whether within the wiring system or elsewhere, to provide false and or non-standard information to the ECU with regard to water temperature is prohibited.

Fitting blocking material into any hose to enable false readings from a sensor is prohibited.

22.2 Oil Sump.

As standard production.

22.3 Oil Pump.

As standard production.

22.4 Oil Filter.

C1, 107 & Aygo Engine.

It is recommended that the engine oil filter, due to its exposed location, is fitted with a metal protection shield to minimise the risk of damage from track debris whilst racing.

23 BRAKES

23.1 Front Brakes.

Type is Free.

23.2 Rear Brakes - Restricted.

The permitted donor vehicle’s standard production “Front” braking system including discs and callipers must be used.

The lightening of braking components is prohibited.

Vauxhall Engine.

Brake Disc: - Vauxhall Corsa standard production diameter = 236mm.

Brake Disc: - Vauxhall Corsa standard production thickness = 12.7mm Maximum. 9.7mm Minimum.

- # C1, 107 & Aygo Engine.
 An ABS Sensor on a wheel hub must be retained.
 Brake Disc - Solid: -Standard production diameter = 247mm +/-0.025mm.
 Brake Disc - Solid: - Standard production thickness = 20.0mm Maximum. 18.0mm Minimum.

23.3 Handbrake/Start line braking handbrake

As Specials General – Rule 23.5.

23.4 Brake Proportioning - Restricted.

As Specials General – Rules 23.1 & 23.7.

24 WHEELS

24.1 Type – Restricted.

One-piece wheels only permitted – Steel or Alloy.

“Beadlock” and or “Beadlock Type” wheels prohibited.

“Split Rim” wheels prohibited.

“Billet” and or “Billet Type” wheels prohibited.

24.2 Diameter & Width – Restricted.

Diameter.

Front Axle – 13” or 14” only

Rear Axle – 13”, 14” or 15” only.

Width:

All Axles maximum width = 6J (6”).

24.3 Modification – Restricted.

Modification of a proprietary manufactured wheel is prohibited.

24.4 Wheel Spacers – Type restricted.

The fitting of wheel spacers is permitted.

Spacer thickness – Maximum 25mm.

25 TYRES

25.1 Tyre Size (All Axles) – Restricted.

Front Axle.

Minimum 13” Size – 145 x 13

Maximum 14” size – 185/70 x 14

Rear Axle (Drive Wheels).

Drive Wheels – See Rule 25.2.

25.2 Control Tyres.

As of 1 January 2024:

Control Tyres of the NASA specified type only are permitted on “Drive Wheels”.

NASA Specified Type: TORQUE TQ025 M&S tread pattern tyres.

Permitted Sizes:

185/65x14.

185/70x14.

185/65x15.

Control Tyres Wet Weather.

NASA Specified Type: Maxsport RB1.

Permitted Sizes:

185/65x14.

185/70x14.

185/65x15.

26 EXHAUST & SILENCING

26.1 Exhaust Manifold – Restricted.

Vauxhall Engine.

The standard production original cast iron engine exhaust manifold complete with Lambda Oxygen sensor must be retained in its original standard production position and form.

Aygo/C1/107 Engine - Restricted.

The standard production original engine exhaust manifold complete with associated Upper Lambda Oxygen sensor must be retained in its original standard production position and form prior to the catalytic converter. The attached Catalytic Converter may be retained or removed. The Lower Lambda Oxygen Sensor must be fitted in the exhaust pipework in a similar location as standard production.

26.2 Exhaust System.

The exhaust system beyond the manifold is free. However, the exhaust system must have a single outlet pipe. The engine exhaust system manifold and pipe-work must be fitted such that it is to the rear of the roll cage uprights. i.e., no manifold or pipe-work shall protrude further forward than the rear roll cage uprights. Catalytic Converters are permitted.

27 BALLAST

- 27.1 The use of specified “Ballast” is permitted.
 Ballast must be as specified. Other forms of “Ballast” are prohibited.
 Ballast may be subject to a scrutineer’s seal to prevent unauthorised adjustment and/or full or part removal at any time.

Ballast Location – Restricted.

Ballast must be located centrally, between nearside and offside chassis floor limits, at the non-drive part of the vehicle. It must be fitted at either and/or both the following permitted locations:

- i. Adjacent to the vehicle front between the foot pedals and most forward part of the chassis.
- ii. Adjacent to the driver’s seat – either beneath the seat and/or rear of the driver’s seat,

- 27.2 Ballast shall be constructed of steel and be in “Plate” form to the following dimensions.
 Overall size limit maximum = 200mm L x 150mm W x 75mm Total Thickness.
 Ballast may be removable and or adjustable.

Adjustment shall be by means of the use of individual steel plates.

The maximum thickness of any individual plate is 10mm thickness. i.e., the number of individual ballast plates is free subject to the maximum total overall thickness of 75mm.

Maximum weight of ballast = 25 Kg.

27.3 Ballast Fixing/Mounting

The ballast must be fixed to a ballast mounting base plate and be held down by a ballast top plate.

The ballast mounting base plate and ballast top plate must be constructed of steel and be 200mm L x 150mm W with a minimum thickness of 10mm and a maximum of 14mm thickness.

The ballast mounting plate must be fixed (Bolted/welded) to the vehicle chassis. It is not permitted to be fixed to vehicle floor or panelling/bodyshell.

If bolted then a minimum of 4 No 10mm Diameter HTS (Minimum grade 8.8) must be used. If welded there shall be a minimum of 4 x 25mm stitch welds.

The individual ballast plates must be fixed to the mounting base plate and held in place by a ballast top plate by means of a minimum of 2 No. 12mm Diameter HTS (Minimum grade 8.8) bolts & full nuts (Type - Plain with spring washer or Nyloc). A minimum of 10mm thread must protrude from the top of the Ballast top plate at all times. See Specials General Fig. 34.

28 VEHICLE CHECK SHEET – CLASS Junior Specials.

NASA reserves the right to designate the information reference source and the method of component checking and to revise the check sheet data at any time.

Note.

The ‘Vehicle Check Sheet’ data and other designated information source will be used in conjunction with the particular vehicle Haynes Manuals / Palgrave / Glasses Guide Technical Services Data (TSD) Sheet and/or vehicle original manufacturer’s technical information/data as a reference when checking the eligibility and legality of the vehicle and or any of its components.

N.B. NASA is considering a future introduction of additional vehicle’s engine & gearbox & “front” suspension. The vehicle engine & gearbox & “front” suspension type to be assessed via trials by designated vehicles.

Upon completion of trials and once permitted the check sheet will be amended to include the additional vehicles details.

VEHICLE CHECK SHEET 1 – Vauxhall Engine/Transmission.

THE PURPOSE OF THE INFORMATION GIVEN IS ONLY TO CHECK THE LEGALITY OF THE VEHICLE, ENGINE, ENGINE ANCILLARIES, GEARBOX, SUSPENSION AND OTHER COMPONENTS.

Vehicle Weight.

The total weight of the complete vehicle including driver at any time must be of an absolute minimum of **525 Kg**.

Vauxhall Corsa 1196cc (1.2 Litre) SOHC engine - 1993 to 2000 Vauxhall Manufacture.

Bore – 72.00mm.

Stroke – 73.40mm.

12 NZ – Distributor ignition system. Without catalytic converter. Compression ratio 9.1:1.

C12 NZ – Distributor ignition system. With catalytic converter. Compression ratio 9.1:1.

X 12 SZ - Distributor less ignition system (Coil Pack). With catalytic converter & EGR System. Compression ratio 10:1.

All non-permitted engines, including their components are prohibited.

Permitted Cylinder Head – Restricted.

The cylinder head must be of Vauxhall manufacture.

Cylinder Head Thickness.

Absolute minimum cylinder head thickness = 94mm.

Cylinder Head Valve Insert Depth and Throat Internal Diameter.

The depth of the valve insert must be not greater than 6mm.

The diameter of the valve insert internal throat must be no greater than: Inlet = 30mm. Exhaust = 25.5mm

Camshafts.

Permitted type.

Vauxhall part ref/no: - 90444758.

AE part ref/no: - CAM453 / CKS2453 EC6111.

BGA part ref/no: - 12NZ / C12NZ / X12SZ –CS2314 / CS2314FK.

X12SZ - CS2372K.

Newman Cams: - NASA JS08.

The Kent Cams AST11 camshaft and all manufacturers “Sports/Sports R/Stock Rod/Rally/Competition/Race” camshafts are prohibited.

Cam Lift.

1196cc.

Maximum = Inlet = 4.8mm (0.1889”).

Maximum = Exhaust = 5.2mm (0.1973”).

Valve Head Diameter.

1196cc.

Maximum = Inlet = 33.1mm

Maximum = Exhaust = 29.1mm

Valve Springs.

Maximum free length/height = 40.5mm.

Maximum coil thickness = 3.8mm.

Pistons.

A maximum of + 0.500 mm oversize bore is permitted.

The oversize bore or re-bore is on the permitted engine’s manufacturers original engine size, as fitted to the make and model of permitted donor vehicle.

Standard replacement pistons only are permitted.

The pistons must be the correct type for the engine concerned.

It is not permitted to fit 10:1 compression pistons in a 9.1:1 compression engine.

Pistons must not protrude above the cylinder block top face.

Check for non-standard pistons.

NASA Scrutineers Committee Permitted Pistons.

“King Pistons” C12NZ – 12NZ Dia. 72.00 +0.50. – 18-3010183.

Conrod Bolts.

As OE Standard production.

ARP or equal types prohibited.

Permitted Distributor.

Distributor Type 12NZ & C12NZ Engine.

Check correct distributor is fitted.

Distributor Less Type (Coil Pack) Engines.

Check correct ECU is fitted and in its original standard production form.

Check for ECU rewriting, remapping, non-standard chip replacement (chipping), non-standard resistors, re-soldering and or not standard production soldering, electrical path changes, removal and or re-fitting of component(s) and or other modification.

Rev Limit.

Maximum = **6250** rpm.

Water pump.

Standard production original and replacement engine mounted water pump only permitted.

Check for modifications to water pump or pump pulley and/or impeller.

Air Box & Filter Box & Air Filter.

The standard production air box must be retained in its entirety and remain in its standard production form, without any modification, and fitted in its standard production location on the top of the Fuel Injection Unit/Throttle Body/Pot.

Vauxhall Corsa 1196cc – Air Box reference number:

GB 90324 005 – PPT20 – Mann 3909168901.

Check for cuts or holes to allow extra airflow.

Permitted “Throttle Body/Pot”.

The 1196cc (1.2) standard production throttle body only is permitted:

GM – 17087071.

GM - 17090049.

GM – 17093148.

Injector colour = Black.

The 1.4 throttle body is prohibited: GM – 17096179.

Permitted Octane Coding Plug.

The standard production 1196cc series octane coding plug must be fitted. Either: 91 RON or 95 RON.

Transmission/Gearbox.

The following gearboxes only are permitted.

Vauxhall Corsa 1196cc. F10/4 WR & F10/5 WR gearbox.

Gear	Input gear Teeth	Output Gear Teeth	Ratio.
1	11	39	3.55 : 1
2	23	45	1.96 : 1
3	33	43	1.30 : 1
4	37	33	0.89 : 1
5	37	29	0.71 : 1
Reverse			3.31 : 1
Differential:		3.74 or	4.18
Final drive Teeth		19	17
Output Teeth		71	71

Vauxhall Corsa 1196cc F13/4 WR or F13/5 WR gearbox (Up to 1997).

Gear	Lay gear Teeth	Output Gear Teeth	Ratio
1	11	39	3.55 : 1
2	23	45	1.96 : 1
3	33	43	1.30 : 1
4	33	35	0.89 : 1
5	37	29	0.71 : 1
Reverse			3.31 : 1
Differential		3.94 : 1 or	4.18 : 1
Final drive Teeth		18	17
Output Teeth		71	71

Vauxhall Corsa 1196cc F13/4 WR or F13/5 WR gearbox (1997 - 2000).

Gear	Lay gear Teeth	Output Gear Teeth	Ratio
1	11	41	3.73 : 1
2	23	45	1.96 : 1
3	23	30	1.31 : 1
4	33	35	0.95 : 1
5	37	29	0.76 : 1
Reverse			3.31 : 1
Differential		3.94 : 1 or	4.18 : 1
Final drive Teeth		18	17
Output Teeth		71	71

Vauxhall Corsa 1196cc F13/5 CR gearbox (1997 - 2003).

Gear	Lay gear Teeth	Output Gear Teeth	Ratio
1	11	41	3.73 : 1
2	21	45	2.14 : 1
3	21	30	1.43 : 1
4	33	37	1.12 : 1
5	33	29	0.89 : 1
Reverse			3.31 : 1
Differential		3.74 : 1 or	3.94 : 1
Final drive Teeth		19	18
Output Teeth		71	71

Note.

It is Competitors responsibility to contact a Scrutineer to confirm that particular gearbox, gear ratios and/or differential are eligible. i.e., permitted by the NASA Scrutineers Committee **before** using them.

It is not permitted to:

Change a gear cluster from "standard". i.e.

- Fit a gear cluster or any gear from a non "F10" or non "F13" gearbox into a "F10" or "F13" gearbox.
- "Manufacture" a gearbox gear cluster using OE standard components to produce a unit with non-OE "Standard" gear ratios or "Gears". i.e., Mix up WR or CR ratios into a single gearbox. E.g., Fit a CR 2nd gear into a WR gearbox or vice-versa.

Clutch.

Standard production original and replacement clutch cover & plate only permitted.

Check for lightening and or excessive "balancing grinds/holes."

Suspension.

Tie Bars including "U" shape mounting bracket – Check for non-standard machining/cutting/shape altering and or drilled holes.

Rear Suspension units – Check that only permitted units fitted.

GM original OE/ KYB – Excel/Ultra"; "Monroe – Original/Reflex". Bilstein "B4–22-040909".

NOT – non-specified Bilstein, Spax, AVO, G.max, Koni.

Brakes.Rear Brakes - Restricted.

Brake Disc: - Vauxhall Corsa standard production diameter = 236mm.

Brake Disc: - Vauxhall Corsa standard production thickness = 12.7mm Maximum. 9.7mm Minimum.

Check for lightening the rear brake discs by "Thinning" and or "Diameter reduction" and or grooving, slotting or drilling and or other machining.

Wheels - Size (All Axles) – Restricted.

Front Axle – 13" or 14" only

Rear Axle – 14" or 15" only.

Tyres - Size (All Axles) – Restricted.Front Axle

Minimum 13" Size – 145 x 13

Maximum 14" size – 185/70 x 14

Rear Axle – Control Tyres Only - TORQUE TQ025 M&S tread pattern.

185/65x14.

185/70x14.

185/65x15.

Control Tyres Wet Weather.

NASA Specified Type: Maxsport RB1.

Permitted Sizes:

185/65x14.

185/70x14.

185/65x15.

Wheelbase.

Minimum = 1828mm (72") (6').

See T.S.D Manual Sheet for other measurements.

VEHICLE CHECK SHEET 2 – Aygo, C1, & 107 Engine/Transmission.

THE PURPOSE OF THE INFORMATION GIVEN IS ONLY TO CHECK THE LEGALITY OF THE VEHICLE, ENGINE, ENGINE ANCILLARIES, GEARBOX, SUSPENSION AND OTHER COMPONENTS.

Citroen C1 998cc 12V.

Peugeot 107 998cc 12V.

Toyota Aygo 998cc 12V.

The C1, 107, and Aygo vehicles listed were produced by a single manufacturer as part of a collaboration of manufacturers. Therefore, a single set of data as follows applies to all 3 vehicles.

Vehicle Weight.

The total weight of the complete vehicle including driver at any time must be of an absolute minimum of **525 Kg**.

ENGINE:

Engine type VVTi Codes - I3. 384F (CFA, CFB). 1KR-FE.

CYLINDER HEAD.

Head Thickness Minimum = 112.5mm.

VALVE LIFT & VALVE TIMING.

The following valve lift & valve timing combinations only are permitted. without all valve operating components.

VALVE TIMING.

Variable Valve Timing (VVT).

VALVE GUIDES.

A standard production OE or NASA permitted reconditioned and or replacement type only is permitted. ‘

VALVE SPRINGS.

Valve Spring Free Length = 51.65mm.

VALVE HEAD DIAMETER.

Inlet valve head diameter (Max) = 27.65mm.

Exhaust valve head diameter (Max) = 23.75mm.

CAMSHAFTS

Standard production OE replacement camshafts only permitted. The Inlet and exhaust camshafts must each remain in the original standard production form and be complete with correct identifying methods and or markings.

The production or adaptation or modification of a camshaft to provide the standard valve timing and/or valve lift, but non-standard timing and/or valve lift at regular degrees of rotation is prohibited.

CAM LOBE HEIGHT

Maximum Inlet = As standard production.

Maximum Exhaust = As standard production.

ENGINE BLOCK

Check if top surface has been machined – “Decked”, Skimmed, Re-faced.

PISTONS

Pistons to be as standard production original and replacement complete with identification marks.

Bore = 71/71.030mm.

Piston Diameter = 70.98mm.

No of Piston rings = 3.

The omission of any standard production piston ring is prohibited.

Piston tops/bowls must not be skimmed/modified.

Piston skirts must not be modified or shortened.

CRANKSHAFT

Crankshaft Stroke = 84.00mm.

FUEL INJECTORS

Fuel Injection Multiple Point = Bosch ME 7.9.5 EFI sequential multiport.

Injectors must be standard production and correct for engine.

Injectors from other models and or vehicles and or aftermarket modified types prohibited.

ECU

Must be in its original standard production form.

Check for ECU rewriting, remapping, chip replacement (chipping), re-soldering and or not standard production soldering, electrical path changes, removal and or re-fitting of component(s) and or other modification

REV LIMIT

“Rev Limiters” must operate at standard production rpm maximum = **6750 rpm**.

WATER PUMP

Standard production original and replacement engine mounted water pump only permitted.

Check for modifications to water pump or pump pulley and/or impeller.

AIR INTAKE DUCTS/AIR BOX

As standard production.

Check for holes drilled and slits cut into air box & duct air intake system.

AIR INTAKE RESTRICTOR PLATE

Check for correct size, parallel internal orifice sides, and location.

Thickness of 10mm +/- 0.2mm only.

Orifice with a maximum parallel bore diameter of size 20mm through the entire thickness of the restrictor plate.

No "Drop In", "Washer" type Restrictor Plate that fits into a separate receptacle adaptor or plate.

FLYWHEEL AND CLUTCH

The starter ring gear must be the correct type for the flywheel used.

Standard production original and replacement clutch cover & plate only permitted.

Check for lightening and or excessive “balancing grinds/holes.”

MAIN BEARINGS

Standard production original and replacement types for the particular engine block used only permitted.

GEARING FULL STRIP CHECK

During a full strip, given below are the numbers of teeth in gearbox.

5 speed gearboxes only permitted.

Manual Transmission.

C551 - 5 Speed.

	Input gear	Output gear
1st	3.545:1	
2nd	1.913:1	
3rd	1.310:1	
4th	1.027:1	
5th	0.850:1	
Rev	3.214:1	

Final Drive Ratio 3.550:1

Multi-Mode Transmission - Toyota Multi-Mode/Citroen SensorDrive/Peugeot 2-Tronic.
C551A - 5 Speed.

	Input gear	Output gear
1st	3.545:1	
2nd	1.913:1	
3rd	1.310:1	
4th	1.027:1	
5th	0.850:1	
Rev	3.214:1	

Final Drive Ratio 3.550:1

Note

It is Competitors responsibility to contact a Scrutineer to confirm that particular gearbox, gear ratios and/or differential are eligible. i.e., permitted by the NASA Scrutineers Committee **before** using them.

It is not permitted to change a gear cluster from "standard"

The correct differential must be fitted in the correct gearbox.

Interchanging of differentials prohibited.

Use of other differentials prohibited.

DIFFERENTIAL TURNING TORQUE.

The differential must have a turning torque of a maximum of 3 lbf/ft (36 lbf/in) (4 Nm) at all times, when measured at the wheel hub. i.e., When the transmission is set to neutral and the nearside wheel and tyre raised off the ground whilst the offside wheel and tyre assembly remains on the ground, and vice-versa, then when a measuring device is applied onto the wheel hub nut the maximum turning torque of the differential and driveshaft assembly must not exceed the stated maximum regardless of the temperature of the unit.

BRAKES

ABS Sensor retained.

Front Brake Disc - Solid: -Standard production diameter = 247mm +/-0.025mm.

Front Brake Disc - Solid: - Standard production thickness = 20.0mm Maximum. 18.0mm Minimum.

Check for lightening the rear brake discs by "Thinning" and or "Diameter reduction" and or grooving, slotting or drilling and or other machining.

Check that ABS sensor retained.

SUSPENSION.

Front Wheel Camber = -0° 47' +/- 0° 45'.

Rear Wheel Camber = -0° 56' +/- 0° 30' Max.

Front Spring Coil Diameter = As standard production.

Front Spring Wire Diameter = As standard production.

Rear Spring Coil Diameter = As standard production.

Rear Spring Wire Diameter = As standard production.

WHEELS - Size (All Axles) – Restricted.

Front Axle – 13" or 14" only

Rear Axle – 14" or 15" only.

TYRES - Size (All Axles) – Restricted.

Front Axle

Minimum 13" Size – 145 x 13

Maximum 14" size – 185/70 x 14

Rear Axle – Control Tyres Only - TORQUE TQ025 M&S tread pattern.

185/65x14.

185/70x14.

185/65x15.

Control Tyres Wet Weather.

NASA Specified Type: Maxsport RB1.

Permitted Sizes:

185/65x14.

185/70x14.

185/65x15.

TYRES

Check correct tyres fitted.

Tyre size - 155/65 x 14.

165/65 x 14.

175/65 x 14.

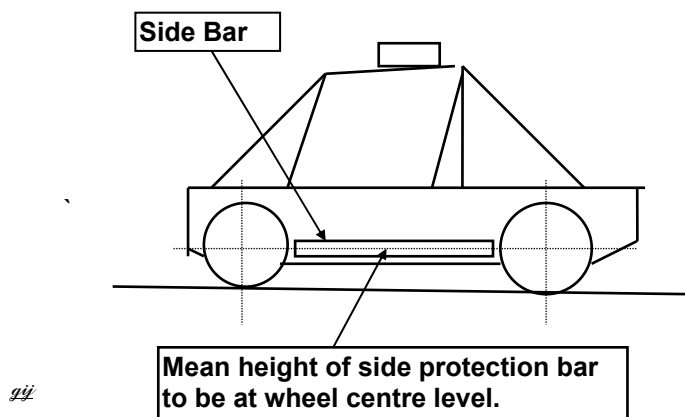
WHEELBASE.

Minimum = 1828mm (72") (6').

NASA reserves the right to amend the check sheet at any time.

NASA RULE BOOKS DRAWINGS/FIGURES – CLASS JUNIOR SPECIALS**FIGURES.****All as SPECIALS - GENERAL****Additional Figures applicable to class - Junior Specials: -**

FIGURE 30 SIDE PROTECTION BAR LOCATION.

**Note.****Side Protection mandatory for Junior Specials**

- See Figures 9, 10, 11, 12, 13 in SPECIALS - GENERAL.

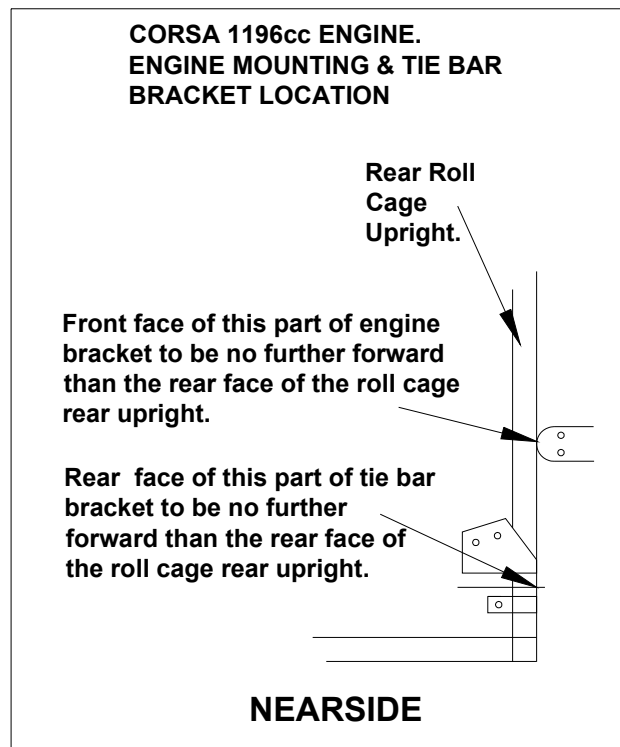
FIGURE 31a – ENGINE SEALING

See Figures 31a - SPECIALS - GENERAL.

FIGURE 31b – ENGINE SEALING

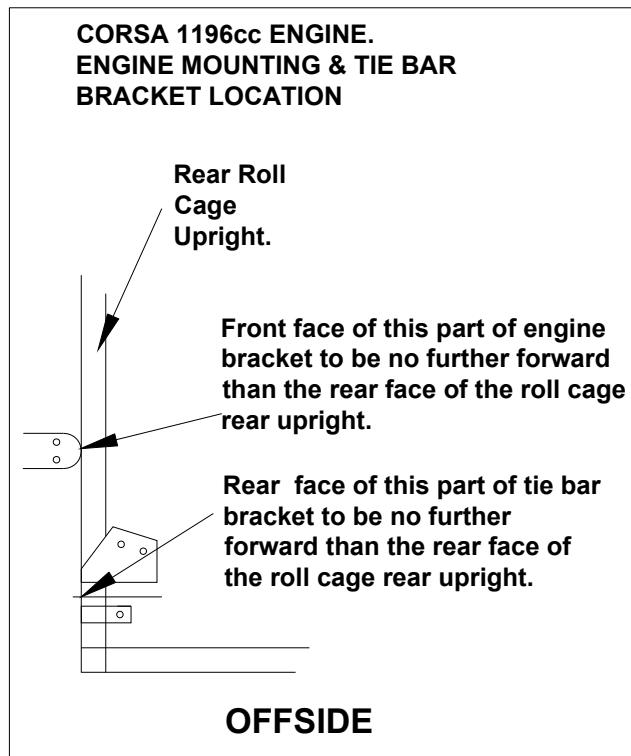
See Figures 31b - SPECIALS - GENERAL.

FIGURE 34a & 34b.
VAUXHALL ENGINE MOUNTING & TIE BAR LOCATION.
N.B. Tie bar bracket must remain as standard shape and size.



gii

FIGURE 34b.
Tie bar bracket must remain as standard shape and size.



gii

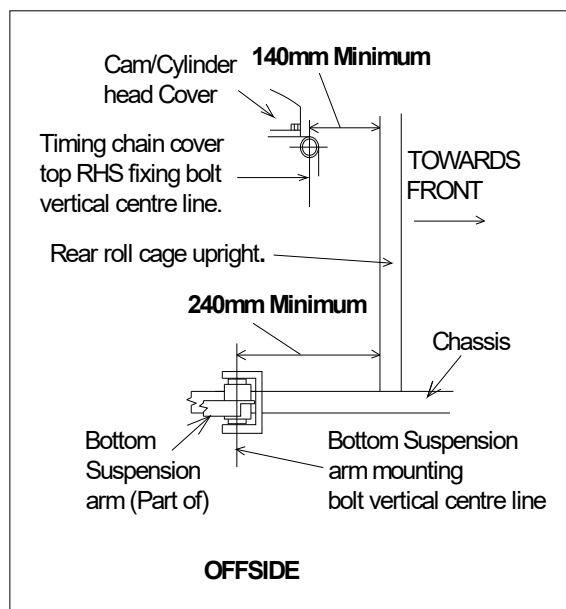
FIGURE 35a & 35b & 35c.

AYGO/C1/107 ENGINE LOCATION & BOTTOM SUSPENSION ARM LOCATION.

N.B. Bottom suspension arm and mountings must remain as standard shape and size.
 Drawings are diagrammatic only.

FIGURE 35a

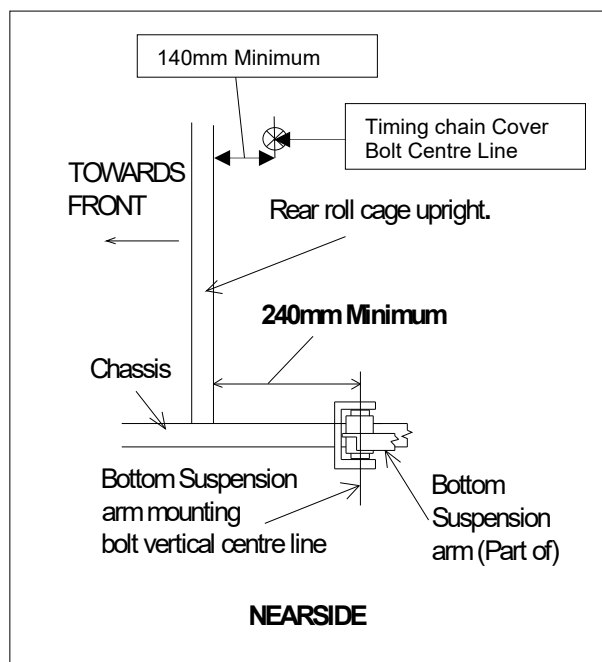
VIEW FROM OFFSIDE.



gij

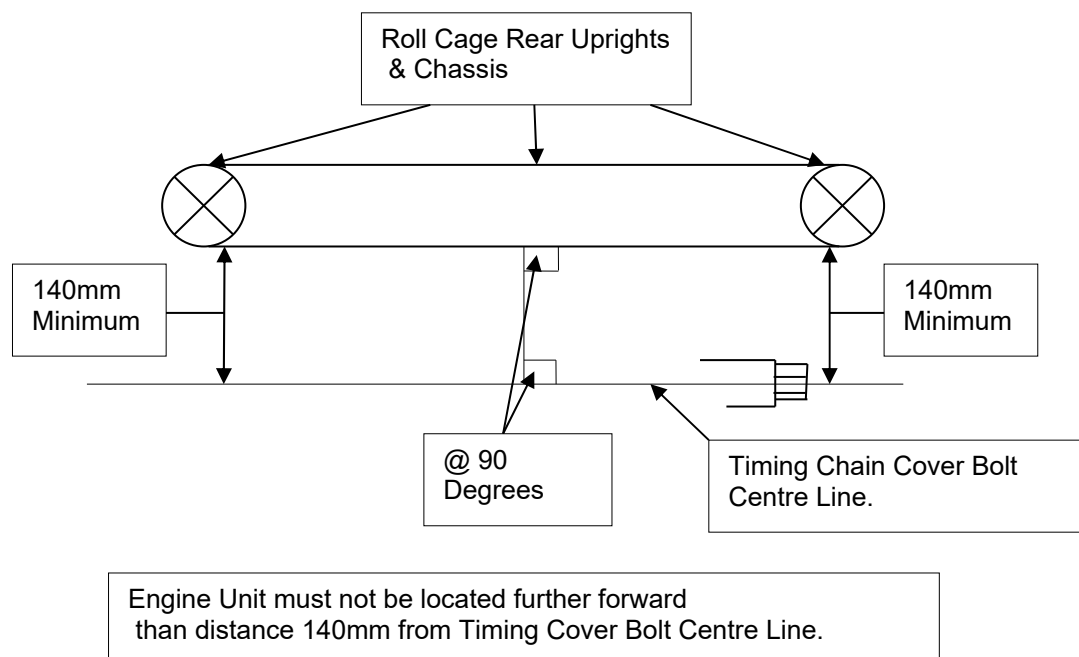
FIGURE 35b

VIEW FROM NEAR SIDE



gij

FIGURE 35c.
ENGINE LOCATION FORWARD LIMIT.



gij

Timing Chain Cover Fixing Bolt vertical centre line to be used as Datum point.

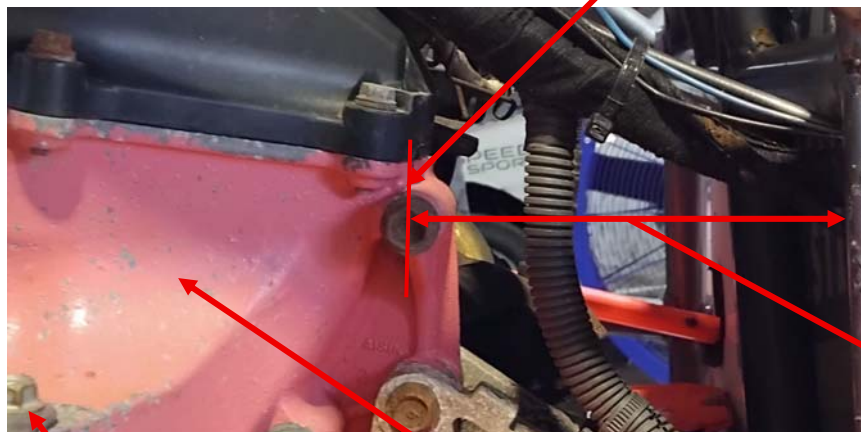
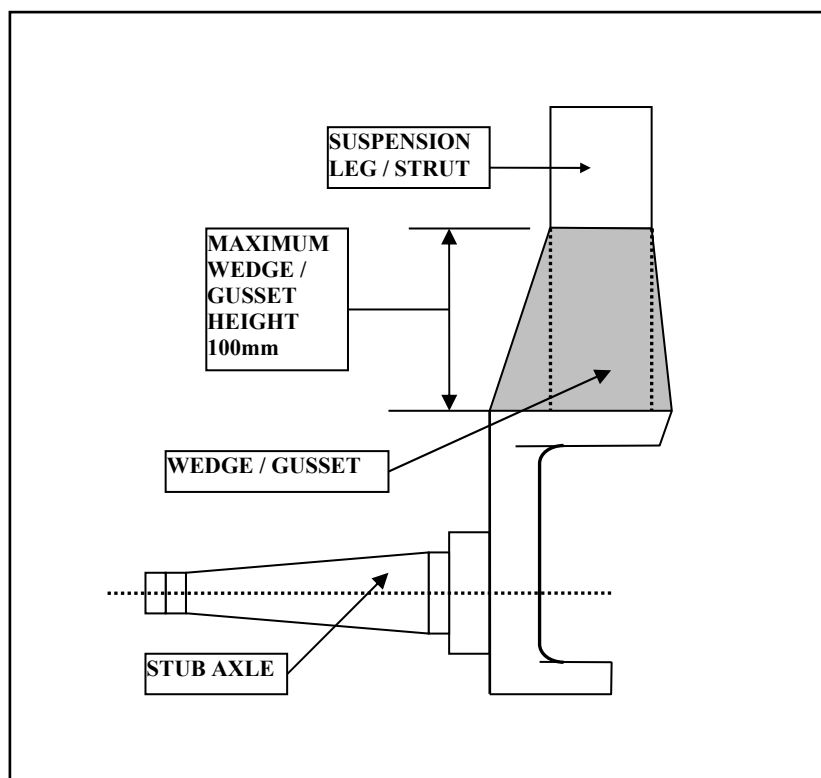
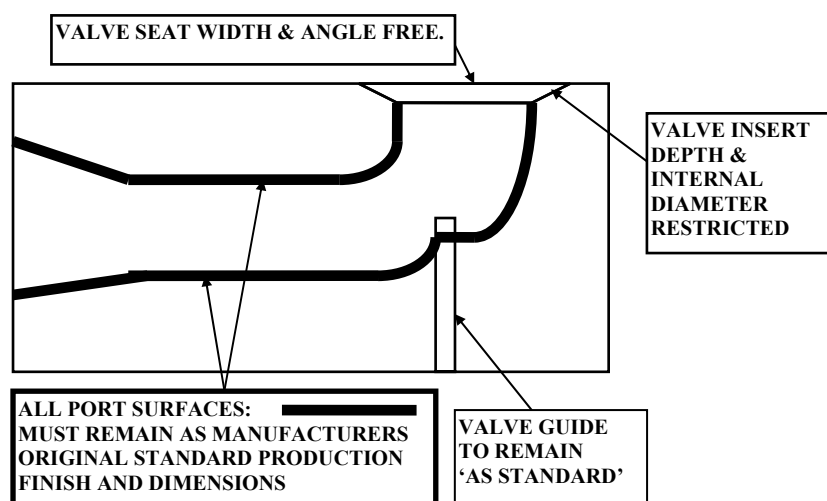


FIGURE 36 SUSPENSION LEG/STRUT “WEDGING.



99

FIGURE 37 CYLINDER HEAD PORTS.



The surfaces of the combustion chamber and inlet port must remain as produced by the original vehicle manufacturer. i.e., "Rough as cast"
Polishing and or Machining and or Grinding and or Reshaping of surfaces is prohibited. Chemical clean only permitted.

99

FIGURE 38a AYGO/C1/107 – RESTRICTOR PLATE.
Type = “Drop In” to fit into Throttle Body Air Entrance Throat.

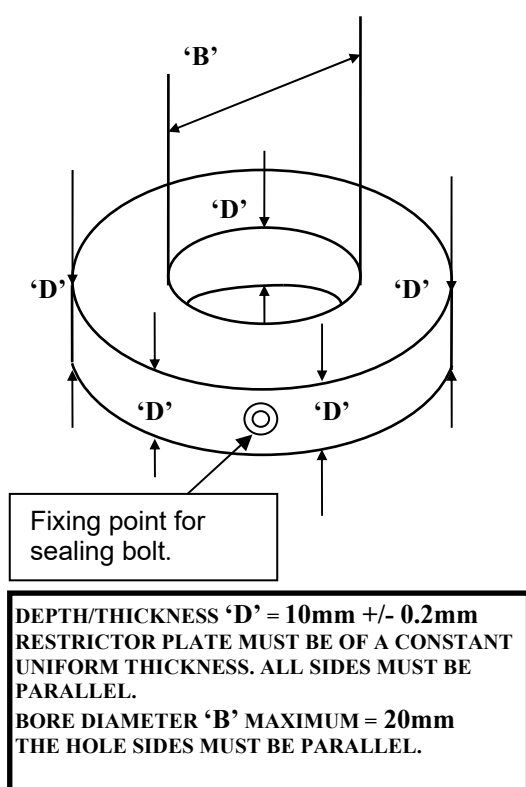
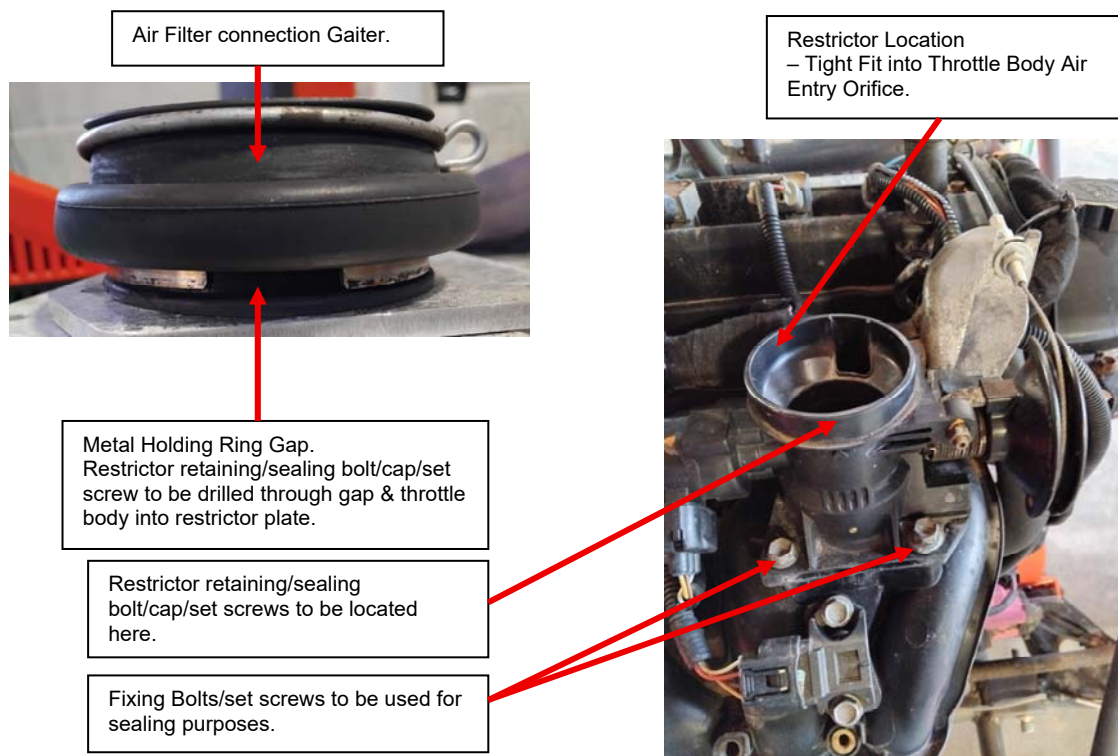


FIGURE 38b AYGO/C1/107 – RESTRICTOR PLATE LOCATION & FIXING.



**The construction rules in this book are intended
for use by Autograss cars taking part in
Autograss events as defined by the
NATIONAL AUTOGRASS SPORT
ASSOCIATION
on a natural surface and are not necessarily
considered safe for other forms of motor sport.**

**Drivers are advised that if they intend using their
cars at events, other than events as defined by the
NATIONAL AUTOGRASS SPORT
ASSOCIATION**

**They should ensure that their cars comply with
the organiser's construction rules.**

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