

**ASSOCIATION OF
AUTHORISING
BODIES**



RULES & REGULATIONS

2020 EDITION

CLASS 10,



"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 2020
UNTIL FURTHER NOTICE**

ALL PREVIOUS EDITIONS ARE INVALID

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.

CLASS 10

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

CLASS 10

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CLASS 10 SPECIAL.

A single seat-racing rear wheel drive vehicle with an single engine or “twin” engines of a total specified cubic capacity. Constructed in accordance with NASA specified construction regulations for Autogross Racing on an unsealed surface only.

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

A single engine or twin engine may be used (See definitions).
See Check Sheet.

Prohibited Engine - See Check Sheet.

For “Single Engine Installation”:

The engine must be sourced from a NASA permitted “Car” (See definitions).

“Motorbike/cycle” engine prohibited.

Minimum cubic capacity normally aspirated = 2071cc.

Maximum cubic capacity is Free.

Forced Induction.

The fitting an engine with a Supercharger and/or Turbocharger is permitted on NASA defined “Car” engines only.

Minimum cubic capacity “Forced Induction” is Free.

Nitrous Oxide (N₂O) Injection is not permitted.

For ‘Twin Engine Installation’:

i. The use of “Forced Induction” is prohibited.

ii. The use of 2 No. engines including “Motorcycle or Motorbike type’ engines permitted.

iii. Minimum cubic capacity normally aspirated = Free.

Maximum cubic capacity normally aspirated = 4000cc (4 Litres) (2.0 Litres each).

iv. Both engines must be of the same original manufacturer, including model, type and cubic capacity (cc) rating.

v. Both engines must be located in the same “Single engine compartment”. The Engine compartment must be within the vehicle chassis.

vi. The complete “Twin Engine” installation and the transmission system(s), including each engine & transmission unit throttle, clutch and gear change mechanism control systems must be such that they operate simultaneously as one complete unit at all times. The temporary dis-engaging of one engine or transmission or ignition or throttle or clutch or gear change mechanism control system is prohibited. There will be a random spot check upon the starting line in order to check that any engine or gearbox or transmission or any part of the gearbox or gears or transmission or ignition or throttle or clutch or gear-change mechanism control systems are not temporarily disconnected.

vii. Both engines and their associated transmission drives must provide motive power to the vehicle driving wheels via a single common ‘drive shaft’ at all times. Devices that “Split” the drive are prohibited.

4.2 Engine Materials. - Free.**4.3 Cylinder- Head Ports & Valves Modification.**

Modifications to cylinder head including valves and ports free.

4.4 Pistons, conrod, crankshaft & flywheel.

Modifications to and type of pistons, con-rods, crankshaft & flywheel free.

4.5 Engine Identification.

The original engine manufacturer’s engine identification numbers must remain and be legible.

5 ENGINE SEALING & CAPACITY LABELLING.

5.1 Not applicable for Class 10.

6 ENGINE LOCATION – As Specials – General.**7 TRANSMISSION.**

7.1 Gearbox/Transmission - Free.

7.2 Gear Lever.

A single gear lever or operating device must be fitted to control the operation of the transmission system ‘gear change’ mechanism for the single engine or twin engines.

The use of ‘sub-levers or devices’ to independently control the gear change system for each engine or transmission in twin-engine installations is prohibited.

- 7.3 Clutch Type & Operation – Restricted.
Clutch Type – Free.
A single clutch pedal must be fitted to control the operation of the ‘clutch mechanism or engaging’ drives to the transmission system mechanism from the engine or engines.
- 7.4 Drive.
Drive must be effected by the two rear wheels only.
- 7.5 Drive Shafts. - Type free.
- 7.6 Wheel Hubs.
Material – Must be metal.
Type free.
- 7.7 Differential Type. - Free.
- 8 VEHICLE DIMENSIONS & WEIGHTS.**
- 8.1. Wheelbase – Restricted.
Minimum = 1750mm. (1.75mtrs).
- 8.2 Vehicle Weight – Restricted.
The total weight of the complete vehicle excluding driver at any time is free.
- 8.3 Vehicle ride height.
The vehicle ride height is free.
- 9 STEERING.**
- 9.1 Steering Wheel.
A full circumference steering wheel must be used. It must have a minimum diameter = Free.
Note.
It is the driver’s responsibility to ensure that the steering wheel is secure at all times. Steering wheels may be subject to random spot checks of steering wheel fixings whilst on the starting line.
- 9.2 Steering Wheel Mounted Controls. - Restricted
Steering wheel mounted controls permitted. However they must not impede, entangle, unlock, unfasten, disengage nor prevent the correct reach and or access to and or operation of any safety harness or other driver operated vehicle controls (e.g. Steering. Ignition switch. Cut off switch. etc.).
- 10 CHASSIS & ROLL CAGE – As Specials - General.**
- 11 CHASSIS PANELS – As Specials - General.**
- 12 SAFETY SHIELDS & GUARDS – As Specials - General.**
- 13 PROTECTION – As Specials - General.**
- 14 SUSPENSION.**
- 14.1 Front Suspension - Type Restricted.
Suspension components must be of metal.
“Inboard” suspension is permitted.
Other types and modifications free.
- 14.2 Rear Suspension - Type Restricted.
Suspension components must be of metal.
“Inboard” suspension is permitted.
Other types and modifications free.
- 15 WINDSCREEN/GLASS – As Specials - General.**
- 16 SAFETY HARNESS - As Specials - General.**
- 17 SEAT - 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.
Type and capacity of electrical battery free. The use of 2 x 12 volt batteries for 24 volt starting permitted.
The fitting of multiple or extra large batteries and/or large and or high thickness battery containers may be construed as ballast (For enclosure type see Specials - General 1 Rule 20.8).

20.2 Electrical Battery location.Nose Cone.

The fitting of an electrical battery enclosure/box/container within the nose cone is permitted subject to type of nose cone construction. See Specials - General Rule 10.22.

20.3 Instrumentation & Gauges.

Instrumentation and gauges free.

21 FUEL.

21.1 Carburetion and or Fuel Injection permitted.

Type and capacity free.

Note.

Where carburetors and or injection systems do not have positive fixings to attach them to a manifold or engine (i.e. nuts/bolts), then a steel wire tether must be fitted to retain them in the event of an accident or roll over.

21.2 Fuel pump and regulator type and capacity free.

21.3 Fuel filter type, number and capacity free.

21.4 Fuel Tank - Nose Cone.

The fitting of a fuel tank within the nose cone is not permitted.

22 COOLING SYSTEMS22.1 Radiators & Coolers.

Number and type free.

22.2 Water Radiators and expansion/header tanks and Oil radiators location – Restricted.

Water Radiators and expansion/header tanks and Oil radiators and tanks must be positioned to the rear of the rear roll cage uprights and be below the top face of the rear brace bars and be within the shaded area shown on Saloons General Fig.18.

i. Water Radiators must have radiator protection bars fitted.

ii. Oil radiators and tanks depending upon their location may be required to have protection bars fitted.

See PROTECTION – Rules 22.8 & 22.9.

22.3 Oil Sump.

Modifications to the oil sump free.

22.4 Oil Pump.

Type and modification – Free.

23 BRAKES23.1 Front Brakes.

Type is Free.

23.2 Rear Brakes.

Type is Free.

A brake calliper may be fitted such that it is either “Inboard” or “Outboard”.

Note.

The nearside and offside brake device must not be on the same side of the axle “Drive box” or “Differential” or centreline.

See Fig. 32.

24 WHEELS24.1 Type.

Type and width of road wheel is free.

24.2 Diameter – Restricted.

Maximum permitted wheel diameter is 17”.

24.3 Wheel Offset/Inset.

Free.

24.4 Modification – Restricted.

Modification of a proprietary manufactured wheel other than machining to suit “Beadlock” conversion is prohibited.

24.5 Beadlock Wheels

Beadlock type wheels may be used but the “Beadlock rim” fixing bolts must have either “Button head” or “Countersunk head” bolts only. Hexagon head “Beadlock rim” fixing bolts prohibited. The fixings must not protrude beyond the wheel rim. All “Beadlock rim” fixing bolts must be present and correctly fitted.

24.6 Wheel Spacers

The fitting of wheel spacers is permitted.

Wheel spacers must be fit for purpose. The use of over large or excessively sized spacers prohibited.

25 TYRES

- 25.1 Tyre Size (All Axles) – Restricted.
Maximum size – 225/70 x 17

26 EXHAUST & SILENCING.

- 26.1 Exhaust systems are free.

27 BALLAST

- 27.1 The use of specified “Ballast” is permitted.
Ballast must be as specified. Other forms of “Ballast” are prohibited.

Ballast Location – Restricted.

Ballast must be located at the non-drive part of the vehicle.
It must be fitted adjacent to the vehicle front between the foot pedals and most forward part of the chassis.

- 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 = 15 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 Dia 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 Saloons General Fig. 34.

28 CHECK SHEET.PERMITTED AND PROHIBITED ENGINES.

The lists of permitted and prohibited engines are not fixed.

NASA reserves the right via an appointed Official and or Scrutineer to permit, reject and or prohibit an engine as being suitable or unsuitable for Class 10 Autograss racing at any time.

It is the Competitors and/or race vehicle constructor's responsibility to contact a Scrutineer to confirm that the engine concerned is eligible before using it in the vehicle.

Permitted Engines.

Those that comply with NASA “Engine” Definition.

“Millington” Engine.

“Scat V4 Engine.

Rotary Engines.

“Motorbike/cycle conjoined” engine. e.g. “RPE” or “Powertec” or similar V4, V6 or V8).

“Motorbike/cycle” engine in a “Twin” installation.

Prohibited Engines.

“Motorbike/cycle” engine in a “Single” installation.

“Motorbike rotary” and or “Hybrid” types (e.g. engine using both “Car” and “Motorbike” components) in a “Single” installation.

FIGURES.

FIGURE 24a TWIN EXHAUST OUTLETS.

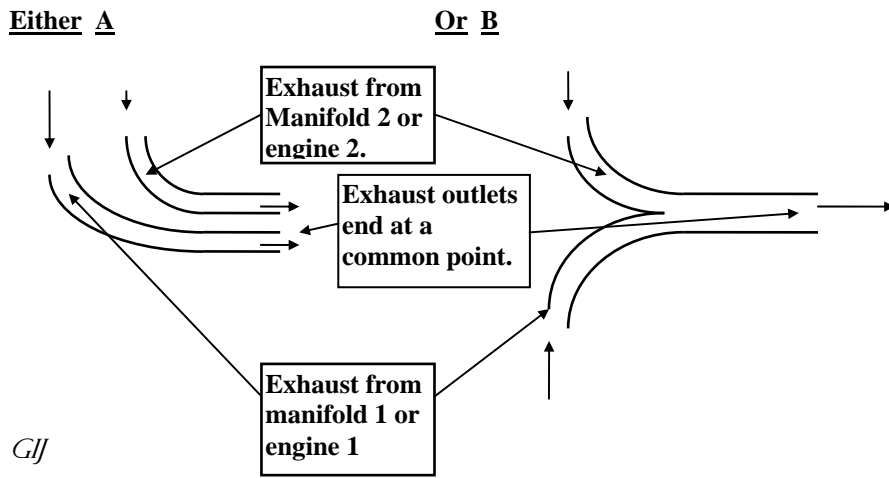


FIGURE 24b TWIN EXHAUST OUTLETS.

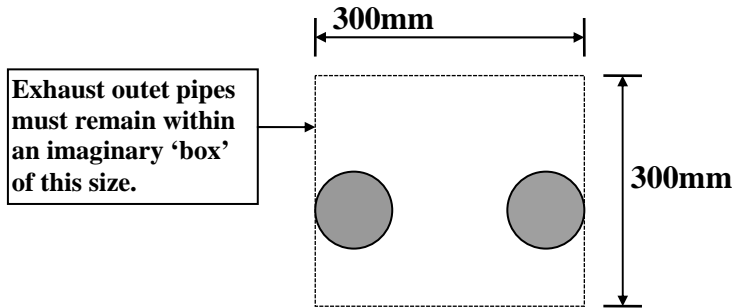
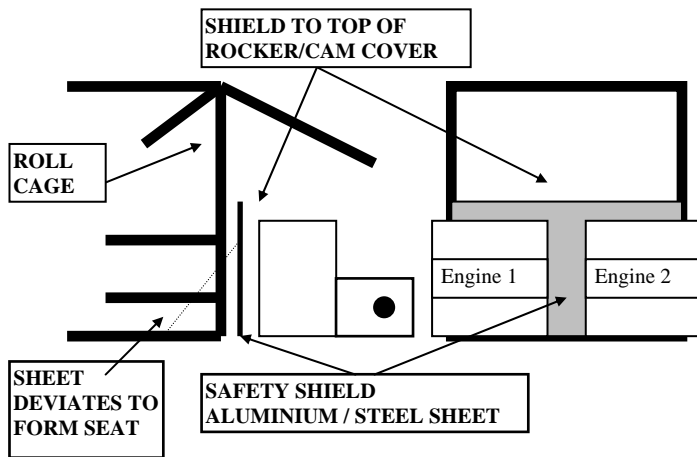


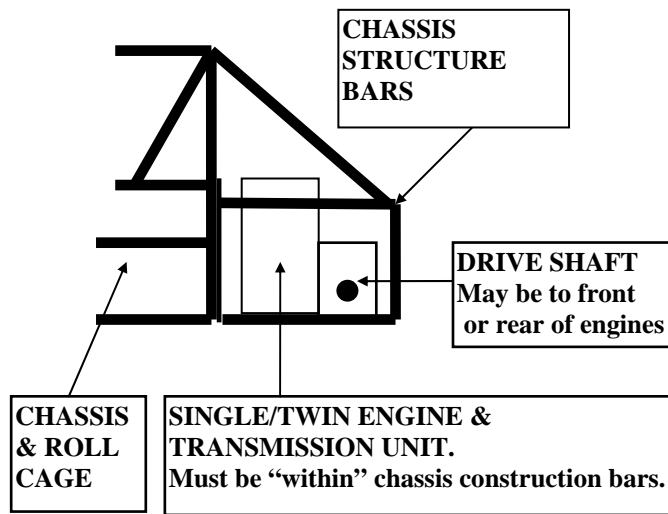
FIGURE 25 ENGINE SHIELD



GJJ

FIGURE 26a Rear Engine Requirements

Rear



GJJ

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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