Off Road Automobiles
Specific requirements for Groups

General

The present regulations relate primarily to the construction of new competition automobiles from the commencement of 2017.

AASA recognises that many automobiles have been in competition for many years, and during those years many changes have been made to the general and specific requirements. This means that technical regulations can become very complex as they have to make allowance for these pre-existing automobiles. Rather than try to cover each variation within the general technical regulations, the AASA uses an Individual Recognition Document to describe an existing automobile. Provided it stays in compliance with the details in this document (4-5 pages with photos and some details) then it can continue to compete. This means that the Technical Regulations remain as simple as possible.

Off Road competition technical and class structure

General

There are four general types of Off Road automobiles, each with their own specific Group technical regulations.

Buggies

These are typically spaceframe automobiles with rear or mid engines driving the rear wheels, with space for one or two occupants.

Truggies

These are typically spaceframe automobiles with front engines driving the rear wheels, with space for one or two occupants.

Production 2WD

These automobiles look like a production model, and use 2WD.

Production 4WD

These automobiles look like a production model, and use 4WD.

Personal Recreational Vehicles

These automobiles utilise the popular light RV models available in the general market. These can cater for one or two occupants and be either 2WD or 4WD.

Modifications

For the production classes there are three levels of modification:

i. Stock: catering for automobiles which retain most of the production body, suspension and powertrain components.

ii. Power: catering for automobiles that retain the production basic shell but have freedom of suspension and powertrain

iii. Wild: catering for prototype automobiles with a production silhouette:

Classes

Organisers of Off Road events are encouraged to use the following class structure, but other Class structures may be permitted by the AASA upon request. Combination of classes will be permitted if insufficient entries are received.

UNLIMITED

Unlimited Buggies and Truggies with one or two crew and engines (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 6000cc.

CLASS 1

Buggies and Truggies with one or two crew members and naturally aspirated engines with a swept volume not exceeding 3500c.

CLASS 2

Buggies and Truggies with two crew members and an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 1650cc (zero tolerance).

CLASS 3

Buggies and Truggies with two crew members and with an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 1330cc (zero tolerance).

CLASS 4

This Class caters for automobiles with one or two crew members, complying with the Wild 2WD technical regulations and having an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 6000cc.

CLASS 5

This Class caters for automobiles with two crew members, complying with the Power 2WD technical regulations and having an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 6000cc.

CLASS 6

This Class caters for automobiles with two crew members, complying with the Super PRV technical regulations and having an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not less than 1201cc and not exceeding 2050cc (no tolerance).

CLASS 66

This Class caters for automobiles with two crew members, complying with the Super PRV technical regulations and having a normally aspirated engine of swept volume not exceeding 1200cc (no tolerance).

CLASS 7

This Class caters for automobiles with two crew members, complying with the Stock 4WD technical regulations and having an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) of up to 6000cc.

CLASS 8

This Class caters for automobiles with one or two crew members complying with the Super 4WD technical regulations and having an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) of up to 6000cc.

CLASS 10

Buggies, and Truggies otherwise in compliance with the Wild 2WD technical regulations, with one or two crew and naturally aspirated engines with a swept volume not exceeding 2500c (no tolerance).

Buggies

A Buggy is a competition automobile designed primarily for Off Road competition, being in its nature a space frame chassis with a rear mounted engine driving the rear wheels only. Buggy frames must be acknowledged by the manufacturer as being suitable for the purpose of Off Road competition events, comply with AASA General Requirements, and comply with any such AASA Individual Recognition Document as is specified in the AASA Passport assigned to the automobile. In the event of conflict, any specification in the AASA Recognition Document shall take priority over any General Requirement.

Truggies

A Truggy is a competition automobile designed primarily for Off Road competition, being in its nature a space frame chassis with a front mounted engine driving the rear wheels only. Truggy frames must be acknowledged by the manufacturer as being suitable for the purpose of Off Road competition events, comply with AASA General Requirements, and comply with any such AASA Individual Recognition Document as is specified in the AASA Passport assigned to the automobile. In the event of conflict, any specification in the AASA Recognition Document shall take priority over any General Requirement.

2WD Production Groups

GENERAL

The following Production Groups are for automobiles that are recognisable as being representative of a series production model, whether in silhouette or based on production mechanical components.

WILD 2WD

1. This Group is for 2WD automobiles with one or two crew and an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 6000cc.

1.1. The body must substantially resemble that of a production vehicle being either Category T (Touring Cars) or Category C (Light Commercial) as defined by the AASA, save that the use of chassis/cab vehicles without rear bodywork, and of tray-top vehicles, is prohibited.

1.2. The load bearing chassis/spaceframe is free, but must be acknowledged by the manufacturer as being suitable for the purpose of Off Road Competition. The spaceframe may incorporate a safety cell for the occupants or a separate safety cage complying with AASA requirements may be fitted.

1.3. The engine is free, subject to it being of not more than 6000cc capacity inclusive of any turbo/supercharging, rotary and/or diesel correction factors.

1.4. The location of the engine is free. No part of the cylinder block may extend across a vertical plane perpendicular to the longitudinal centreline of the through the middle of the wheelbase.

1.5. The transmission and final drive is free, save that a transaxle may only be used if a transaxle was used in the production automobile represented (see 1.1)

POWER 2WD

2. This Group is for modified Series Production based 2WD automobiles with engines not exceeding 6000cc, inclusive of any turbo/supercharging, rotary and/or diesel correction factors.
   - 2.1. The automobile must be derived from a series production model being either Category T (Touring Cars) or Category C (Light Commercial) as defined by the AASA, save that the use of chassis/cab vehicles without rear bodywork, and of tray-top vehicles, is prohibited.
   - 2.2. The basis of these Group Regulations is that all modifications to the original automobile are permitted except for those prohibited/restricted in the following regulations.
   - 2.3. The original silhouette of the coachwork of the automobile, when viewed from the side and above, must be retained.
     - 2.3.1. This shall not apply to the areas ahead of and below the axis of the front wheel, and behind and below the axis of the rear wheels. In these areas material may be deleted only.
   - 2.4. The bodyshell/monocoque, less all hanging and swinging panels must be unchanged in material. Any additions made to the bodyshell of the automobile must respect this requirement.
   - 2.5. A bull bar/brush guard not exceeding the width (at the front) of the bodywork above the front wheels may be fitted.
   - 2.6. The radiator grille must remain unchanged in shape and must remain in its original location. Where the grill is incorporated into the front bumper fascia the complete fascia above a horizontal plane through the front wheel axes must be retained in shape.
   - 2.7. One or more roof vents may be fitted, but they must be in the forward one-third of the roof, with their opens side facing forward, and their vertical opening not greater than 10cm
   - 2.8. Where the production automobile is equipped with a chassis and/or sub-frames, these must be retained in their original location; and must remain unchanged in dimensions, plan view and silhouette
   - 2.9. The maximum permitted variation of the wheelbase from the manufacturer's specification is plus or minus 3%.
   - 2.10. The complete wheels are free. They must be covered, as seen from above, by the bodywork, or flares firmly attached to the bodywork, for at least one third of the circumference of the wheel.
   - 2.11. The original front door shells, hinges and latches must be retained, except that any anti intrusion bars and the window channels of the door above the lower level of the window aperture may be removed.
   - 2.12. Each rear door opening must be closed by a panel of the same external shape as the removed door.
   - 2.13. It must not be possible for any part of the occupant's bodies to pass between the anti-intrusion bars of the safety cage and the door outer skin.

2.14. Head and tail light assemblies must be retained in their original location and be operational

2.15. The engine is free, subject to it being of not more than 6000cc capacity inclusive of any turbo/supercharging, rotary and/or diesel correction factors.

2.16. Notwithstanding 2.4 above, the firewall and floor pan may be modified to permit the engine to be moved into the habitacle. The engine must remain isolated from the habitacle by a cover made from the same material as the original firewall. Where the engine is moved from its original location a scattershield (see AASA General Requirements for Off Road) must be fitted to protect the occupants from projectiles resulting from the derangement of the clutch/flywheel assembly.

2.17. The location of the engine is free, save that it must remain in the same general location as the original automobile. No part of the cylinder block may extend across a vertical plane perpendicular to the longitudinal centreline of the automobile through the middle of the wheelbase.

2.18. The original engine/gearbox/final drive configuration, in relation to the body, must be retained.

4WD Production Groups

GENERAL

The following Production Groups are for automobiles that are recognisable as being representative of a series production 4WD model, whether in silhouette or based on production mechanical components

STOCK 4WD

3. The automobile must be derived from a series production 4WD model being either Category T (Touring Cars) or Category C (Light Commercial) as defined by the AASA, save that the use of chassis/cab vehicles without rear bodywork, and of tray-top vehicles, is prohibited.

    3.1. To be eligible for this Group:

    3.1.1. The automobile model must be a series production 4WD/AWD model with a Kerb Weight of less than 3 tonnes.*

    3.1.2. Cab/Chassis automobiles must be fitted with “Utility” style rear bodywork. For the avoidance of doubt a tray fitted with demountable sides does not fulfil this requirement.

    3.1.3. At least 25 examples of the model must have been registered for unrestricted road use in Australia.*

    3.1.4. The engine capacity of the unmodified automobile may not exceed 6000cc, inclusive of any turbo/supercharging, rotary and/or diesel correction factors.*

    3.2. All modifications are forbidden unless expressly authorised by these Specific Regulations, or required by the AASA General Regulations for Off Road

    3.3. Coachwork below a plane through the foremost point of the bumper/front fascia and through the front wheel axis may be removed.

    3.4. Coachwork below a plane through the rearmost point of the bumper/rear fascia and through the rear wheel axis may be removed.

    3.5. The front bumper bar/front fascia may be replaced with a bull bar or brush guard.

    3.6. Wheel arch flares/extensions may be fitted to the production guards.

    3.7. Interior trim, seats and floor coverings may be removed or replaced freely. If removed, the front door trims must be replaced by flat panels of adequate strength to prevent

any part of the occupant's bodies from pass between the anti-intrusion bars of the safety cage and the door outer skin. Sound deadening and sealing material may be removed from the floorpan and firewall. Instruments may be added. The steering wheel is free. Ancillary devices, the sole purpose of which is to improve comfort and ease of use, are permitted to be added freely within the habitacle.

3.8. Material may be added to the chassis/bodyshell for strengthening purposes provided the material added remains in contact with the underlying material. Mountings points for additional suspension dampers and bump stops may be added.

3.9. The cylinder bore may be increased to accommodate an oversize piston of a size permitted by the manufacturer. The block may be decked.

3.10. Pistons, gudgeon pins, retainers and rings are free

3.11. The crankshaft and connecting rods may be chemically and/or heat treated, and balanced by the removal of metal only.

3.12. The flywheel is free provided the mass of the replacement is within ±5% of that of the original component.

3.13. The removable part of the engine sump are free.

3.14. Oil coolers may be fitted freely, save that they must not be mounted within the habitacle. Oil filters may be replaced, added or relocated freely.

3.15. The carburettor(s) is/are free, provided there is no increase in the total number of venturis. Throttle linkages may be modified and adaptor plates used to facilitate fitment of replacement carburettors.

3.16. The air cleaner and ducting upstream of the carburettor/throttle body is free.

3.17. The inlet manifold may be modified solely by means of the removal of material from the internal tracts

3.18. On automobiles originally fitted with fuel injection systems, the fuel Injectors and electronic/mechanical control systems are free provided that no modifications are made to the manifold. Throttle bodies, where demountable, are free as to their design but not their number.

3.19. Fuel pumps, lines and filters are free.

3.20. Anti-pollution equipment may be removed and resulting openings blocked off.

3.21. Engine coolant radiators and thermostats are free provided they mount in the same general location to the original fixtures. Cooling fans are free.

3.22. Ancillary belts and pulleys are free. For the avoidance of doubt camshaft drives are not regarded as ancillary.

3.23. Valves, valve springs, collets and retainers are free. Valve guides may be added or replaced provided they remain concentric with the original guides.

3.24. Camshaft(s) may be replaced by others with different lift/timing characteristics provided they are interchangeable with the original.

3.25. The exhaust system is free from the cylinder head ports.

3.26. Elastomeric engine mounts may be modified or replaced by interchangeable items.

3.27. The boost pressure of forced induction engines is free as are associated pressure control devices

3.28. Intercoolers may be replaced provided the replacement maintains the same operating principle and requires no modifications to the coachwork to enable fitment.

3.29. Gearbox mounts are free.

3.30. Clutch linings are free.

3.31. Gear and final drive ratios may be changed to other ratios provided optionally by the manufacturer, either for the Australian or international markets.

3.32. Automatic transmissions may be modified to the extent necessary to provide for direct driver selection of the gear.

3.33. Oil cooling systems may be added or replaced provided all components of the system are external to the habitacle.

3.34. The differential is free provided its fitment requires no modification to other components of the final drive assembly.

3.35. The suspension may be modified as provided for in the following:

3.35.1. The suspension mounting points, spring mounts/seats and suspension components may be strengthened by the addition of material.

3.35.2. Suspension springs are free, but not their number or type.

3.35.3. The original suspension dampers may be replaced by others of free design.

3.35.4. One additional suspension damper and requisite mounting points may be added to the suspension for each road wheel. At the top, this may be mounted to the chassis or bodywork, and may penetrate the inner skirt into the engine bay at the front. The original damper mount may be moved or modified to the extent required for fitment of the additional damper unit.

3.35.5. Devices to limit suspension travel in either direction may be added. Modification of existing components is authorised to the extent required to permit their fitment. Hydraulic bump stops shall not be regarded as damping units for the purpose of 3.35.4

3.36. Fuel tanks may be added or replaced freely, subject to AASA General Requirements

3.37. The complete wheels are free. They must be covered, as seen from above, by the bodywork, or flares firmly attached to the bodywork, for at least one third of the circumference of the wheel.

3.38. Brakes

3.38.1. Brake pads, linings, discs and drums are free

3.38.2. Brake system components may be replaced by others from the same manufacturer provided the functional dimensions of the system are not increased.

3.38.3. Handbrakes may be removed.

3.39. Safety Cage

3.39.1. Each automobile must be fitted with a Safety Cage that complies with AASA Class 2 requirements. Additional bracing is permitted in the front windscreen opening provided that the driver's vision is not unduly obscured and the bracing does not form a cross.

3.40. General

3.40.1. Fasteners used throughout the automobile are free provided they are of the same or higher rated grade.

3.40.2. Gaskets used throughout the automobile are free

3.40.3. Bearings used throughout the automobile are free provided they are of the same type and interchangeable with the original bearings.

3.40.4. All lines and hoses carrying fluid are free, as is their location and methods of attachment subject to AASA General Requirements.

3.40.5. The electrical system is free provided that the system retains the same nominal voltage and the type of any ignition system is unchanged.

3.40.6. Where marked with an asterisk (*), the entrant is responsible for furnishing documentation as proof of compliance This may include supporting information from a relevant brochure, official documents issued by the

manufacturer/importer/distributor, or such other evidence as may be required to the satisfaction of event officials or AASA.

WILD 4WD

4. This Group is for 4WD automobiles with one or two crew and an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 6000cc.
    - 4.1. The body must substantially resemble that of a production vehicle being either Category T (Touring Cars) or Category C (Light Commercial) as defined by the AASA, save that the use of chassis/cab vehicles without rear bodywork, and of tray-top vehicles, is prohibited.
    - 4.2. The load bearing chassis/spaceframe is free, but must be acknowledged by the manufacturer as being suitable for the purpose of Off Road Competition.
    - 4.3. The spaceframe may incorporate a safety cell for the occupants or a separate safety cage complying with AASA requirements may be fitted.
    - 4.4. The complete wheel assemblies must be fully covered by the coachwork when viewed from above.
    - 4.5. The engine is free, subject to it being of not more than 6000cc capacity inclusive of any turbo/supercharging, rotary and/or diesel correction factors.
    - 4.6. The location of the engine is free. No part of the cylinder block may extend across a vertical plane perpendicular to the longitudinal centreline or through the middle of the wheelbase.
    - 4.7. The transmission, transfer unit and final drive assemblies are free.

Personal Recreational Vehicles

GENERAL

This Group covers a range of series production light Off Road automobiles with one or two seats generally available to the public for use in off road recreational activities.

SUPER PRV

5. To be eligible for the SUPER PRV Group, automobiles must be of a model appearing in the list below and have an engine capacity (inclusive of any turbo/supercharging, rotary and/or diesel correction factors) not exceeding 2050cc capacity.

Approved Models

Approved list of Super PRV models		
Manufacturer	Model	Recognition Document
Polaris	RZR Models	TBC
Can Am	Commander	TBC
	Maverick	TBC
CF Moto	Z6	TBC
	Z6 Spec R	TBC
Yamaha	Rhino	TBC
	XYZ	TBC
Arctic Cat	Wild Cat 1000i H.O	TBC
BBM	1100 Cyclone	TBC

5.1. Each automobile must remain unmodified unless expressly authorised by these Specific Regulations, or required by the AASA General Regulations for Off Road

5.2. All OEM factory accessories available for an eligible model PRV from the manufacturer, with an OEM part number are eligible to be included with the vehicle listed above.

5.3. The coachwork may be modified by the addition of accessories (e.g. Windscreen) supplied by the manufacturer, or an aftermarket supplier where specifically produced for the model concerned*.

5.4. Each side of the automobile next to the occupants shall be fitted with a panel of sufficiently rigid material up to the height of the lower edge of the scuttle panel. This shall provide protection to the occupants from the ingress of material thrown from the wheels, and assist to restrain the occupants' limbs within the confines of the automobile structure.

5.5. Seats may be replaced by others in compliance with AASA General Regulations.

5.6. The chassis of the automobile may be strengthened by the addition of material, and by the fitment of a safety cage.

5.7. Where specified in event regulations, the manufacturer's upper structure may be removed to facilitate the fitment of a safety cage.

5.7.1. Such a safety cage shall be to the same requirements as for a Buggy up to 800kg.

5.7.2. The safety cage shall incorporate a roof plate as per GRO requirements.

5.7.3. Where a cage is required two continuous door bars shall be added to each side of the automobile. These shall be generally horizontal, with the upper bar as high as possible

5.7.4. The safety cage shall not unduly impede egress so that the occupants can exit the vehicle normally within 10 seconds.

5.8. Freedoms are extended to the engine/powertrain assembly in the following areas:

5.8.1. The cooling system for engine and transmission fluids.

5.8.2. The design and number of gearbox/transmission mounts

5.8.3. The clutch assembly

5.8.4. The ignition system for naturally aspirated engines

5.8.5. For naturally aspirated engines, the induction and air cleaner assemblies upstream of the throttle body or carburettor systems.

5.8.6. For forced induction engines, the induction and air cleaner assemblies upstream of the compressor housing inlet.

5.9. The suspension may be modified as follows:

5.9.1. Dampers and their mounting points are free, save that no more than one damper unit may be used per road wheel assembly.

5.9.2. Suspension components may be strengthened by the addition of material.

5.9.3. Suspension arms are free provided wheelbase remains unchanged. Track width to be no more than 2000mm measured from outside to outside of tyres unless manufacturers wheel track is wider in standard or factory option configuration.

5.9.4. Ball joints and elastomeric bushings are free.

5.9.5. Suspension springs are free, but not their number or type.

5.9.6. Sway bars and their mountings may be added or replaced.

5.9.7. Devices to limit suspension droop may be added. Modification of existing components is authorised to the extent required to permit their fitment.

5.9.8. Non-assisted steering systems may be replaced by power assisted systems

5.10. Fuel tanks may be replaced or relocated, but must comply with AASA General Requirements.

5.11. Wheels and tyres are free.

5.12. Brakes may be modified as follows:

5.12.1. Brakes pads/linings are free

5.12.2. Power assistance may be added

5.12.3. A handbrake may be added provided it works simultaneously on both wheels of the same axle

5.12.4. A mechanism to vary front to rear brake bias may be added

5.13. The battery, generator/alternator and wiring system is free provided the nominal system voltage is unchanged.

5.14. GENERAL

5.14.1. Fasteners used throughout the automobile are free provided they are of the same or higher rated grade.

5.14.2. Gaskets used throughout the automobile are free

5.14.3. Bearings used throughout the automobile are free provided they are of the same type and interchangeable with the original bearings.

5.14.4. All lines and hoses carrying fluid are free, as is their location and methods of attachment subject to AASA General Requirements.

5.14.5. Where marked with an asterisk (*), the entrant is responsible for furnishing documentation as proof of compliance This may include supporting information from a relevant brochure, official documents issued by the manufacturer or importer/distributor, or such other evidence as may be required to the satisfaction of event officials or AASA.

Motorbuggies

GENERAL

This Group covers a range of light Off Road competition automobiles with one seat and powered by an engine derived from a production motorcycle. They are not eligible for competition in Off Road events in which automobiles from any Off Road Group other than Motorbuggies are eligible.

Motorbuggies are for use in races on unsealed tracks of generally less than 3km in length. The tracks may include jumps or other speed limiting sections. The circuit shall be designed to hold maximum automobile speeds below 100km/h. Each track shall be licensed by the AASA.

TROPHYKARTS

6. To be eligible for the TrophyKart Group, automobiles must be of a model appearing in the list below, or as specifically authorised in Event Regulations.

Approved Models

Approved list of TrophyKart models		
Manufacturer	Model	Recognition Document
Trophy Kart LLC.	JR 1	TBC
	JR-2	TBC
	RS200	TBC
	RS400	TBC
	Mod Kart	TBC
	TK600R	TBC
AOK Pty Ltd	TBC	TBC

6.1. Each automobile must remain unmodified unless expressly authorised by Event Regulations, or required by the AASA General Regulations for Off Road GRO.

TORC BUGGIES

7. To be eligible for the TORC Buggy Group, automobiles must have an engine capacity of less than 1340cc, and comply AASA General Regulations for Off Road Racing (GRO) and Event Regulations.