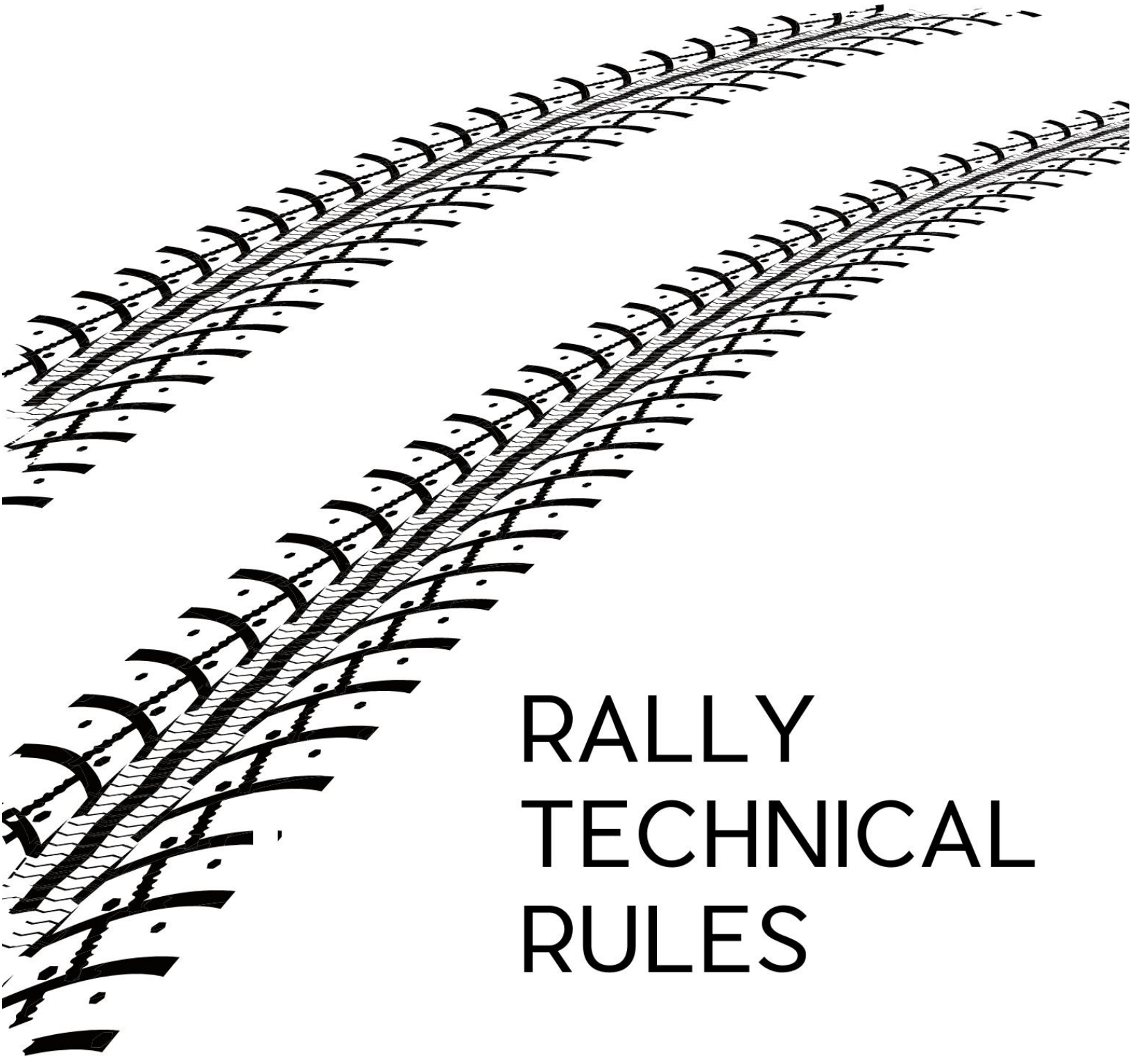




AMERICAN RALLY
ASSOCIATION®



RALLY TECHNICAL RULES

Rally Technical Rules
American Rally Association

2021 Edition

ARA reserves the right, upon written application, to grant specific, limited exemptions to these regulations where it can be shown that the exemption is in the best interests of the sport or in the interest of safe conduct of the sport. Granted exemptions shall be communicated in writing by the ARA President or, in the case of an ARA National Championship event, the ARA President or the Competition Director ~~National Series Manager~~ and be included in the event's Supplementary Regulations or posted on the event's Official Notice Board.

Table of Contents

1. COMPETITOR PERSONAL SAFETY EQUIPMENT	1
1.1 Helmets	1
1.1.1 Helmet Standards	1
1.1.2 Scrutineering Failure.....	1
1.2 Frontal Head Restraint.....	1
1.2.1 Frontal Head Restraint Standards	1
1.2.2 Tethers	1
1.3 Driving Suits.....	2
1.3.1 Standards	2
1.3.2 Usage	2
1.3.3 Footwear.....	2
2. ELIGIBILITY OF VEHICLES AND EQUIPMENT	3
2.1 Definitions.....	3
2.1.1 Interior bodywork	3
2.1.2 Exterior bodywork	3
2.1.3 Chassis.....	3
2.1.4 Vehicle Weight.....	3
2.1.5 Model.....	3
2.1.6 Model variant	3
2.1.7 Original equipment (OEM)	3
2.1.8 Generation.....	3
2.2 Vehicle Safety Regulations	4
2.2.1 Road worthiness	4
2.2.2 Roll Over Protection.....	4
2.2.3 Protective Padding.....	5
2.2.4 Batteries	5
2.2.5 Master Electrical Disconnect Switch	5
2.2.6 Windows	6
2.2.7 Mud flaps	6
2.2.8 Fuel, fuel tanks and lines	6
2.2.9 Towing eyes.....	7
2.2.10 Loose articles.....	7
2.2.11 Door panels	7
2.2.12 Roofs	7
2.2.13 Supplemental & Passive Restraints	8
2.2.14 Ground Clearance	8
2.2.15 Power Door Locks	8
2.2.16 Steering Locking Device	8
2.2.17 Exhaust system	8

2.2.18 Hoods	8
2.3 Vehicle Safety Equipment.....	8
2.3.1 Seats	8
2.3.2 Seat Mounting.....	8
2.3.3 Safety Harness	9
2.3.4 Safety Harness Installation	9
2.3.5 Fire extinguishers	10
2.3.6 First Aid Kit	11
2.3.7 Warning Devices.....	12
2.3.8 Tow Rope	12
2.3.9 Camera and Camera Mounts.....	12
2.3.10 Belt Cutters/Glass Breakers.....	12
2.3.11 Spill Kit.....	12
3. GENERAL REGULATIONS.....	13
3.1 Bodywork.....	13
3.1.1 Good Appearance.....	13
3.1.2 Bumper Location.....	13
3.1.3 Tires Covered	13
3.1.4 Spoilers.....	13
3.1.5 Paintwork.....	13
3.2 Identification of Vehicles and Crew.....	13
3.2.1 Vehicle Graphics Standards	13
3.2.2 Door Reserved Space	13
3.2.3 Competitor Identification	13
3.2.4 Windscreen Banner	13
3.2.5 Hood Reserved Space.....	14
3.3 Lights	14
3.3.1 Compliance With State Requirements	14
3.3.2 Headlights.....	14
3.3.3 Manufacturer-fitted Fog Lights	14
3.3.4 Reversing Lights	14
3.4 Tire studs.....	14
3.5 Documentation.....	14
3.6 Canadian Vehicles.....	14
3.6.1 Vehicle Class	14
3.6.2 Vehicle Eligibility	14
3.7 Restricted Driver Vehicle Requirements	15
3.7.1 Restrictors.....	15
3.7.2 Forced Induction Restrictor.....	15
3.7.3 Normally Aspirated Restrictor	15

Table A – Class, Engine Type, Maximum Displacement, Restrictor, Minimum Weight
..... 16

4. VEHICLE CLASSES..... 17

- 4.1 All Open Classes (Open 4WD, Naturally Aspirated 4WD, Open 2WD) 17
 - 4.1.1 Class Displacement and Weight Rules 17
 - 4.1.2 Production-based..... 17
 - 4.1.3 Factory Floor Pan and Firewall 17
 - 4.1.4 Body Panels..... 17
 - 4.1.5 Wheelbase..... 17
 - 4.1.6 Engine Location 17
 - 4.1.7 Fuel..... 17
 - 4.1.8 Alternate Fuels..... 17
 - 4.1.9 Electronically Controlled or Actuated Components 17
 - 4.1.10 Damper Bushings 18
 - 4.1.11 Turbocharger and Exhaust Gasses 18
 - 4.1.12 Bodywork..... 18
 - 4.1.13 Exceptions 18
- 4.2 Open 4WD Class 18
 - 4.2.1 Non-compliant Vehicles 18
 - 4.2.2 Matching Engine, Transmission and Chassis 18
 - 4.2.3 Restrictors..... 18
 - 4.2.4 Rotary Engines 19
 - 4.2.5 Turbocharger/Supercharger Restrictions 19
 - 4.2.6 Electronic Controls..... 19
- 4.3 Naturally Aspirated 4WD Class..... 20
 - 4.3.1 Engine and Transmission 20
 - 4.3.2 Other Applicable Rules 20
- 4.4 Limited 4WD Class 20
 - 4.4.1 Drive Configuration 20
 - 4.4.2 Bodywork..... 20
 - 4.4.3 Hoods 20
 - 4.4.4 Seam Welding and Strengthening 20
 - 4.4.5 Unibody 20
 - 4.4.6 Tunnel..... 20
 - 4.4.7 Rear Subframe 20
 - 4.4.8 Strut/Shock Towers 20
 - 4.4.9 Front Doors..... 20
 - 4.4.10 Wheel Tubs..... 20
 - 4.4.11 Front and Rear Subframes 21
 - 4.4.12 Suspension Dampers 21

4.4.13 Hubs	21
4.4.14 Control Arms	21
4.4.15 Engine and Manufacturer	21
4.4.16 Cylinder Head	21
4.4.17 Valve Train Components	21
4.4.18 Crankshaft	21
4.4.19 Turbocharger/Supercharger Restrictions	21
4.4.20 Intercooler	22
4.4.21 Throttle Body and Manifold	22
4.4.22 Exhaust System	22
4.4.23 Engine Cooling System	22
4.4.24 Flywheel and Clutch	22
4.4.25 Transmissions/Transaxles	22
4.4.26 Sequential Shift	22
4.4.27 Limited Slip Differential	22
4.4.28 Rear Drive System	22
4.4.29 Electronics	22
4.4.30 Minimum Weight	22
4.4.31 Other Technical Rules	23
4.4.32 Exceptions	23
4.4.33 Water Injection	23
4.4.34 Dry Sump	23
4.5 Open 2WD Class	23
4.5.1 Drive Configuration	23
4.5.2 Rotary Engines	23
4.6 Limited 2WD Class	23
4.6.1 Drive Configuration	23
4.6.2 OEM Bodywork	23
4.6.3 Seam Welding and Strengthening	23
4.6.4 Unibody	23
4.6.5 Chassis Modifications	23
4.6.6 Cross-members	24
4.6.7 Suspension Dampers	24
4.6.8 Hubs	24
4.6.9 Control Arms	24
4.6.10 Engine Limitations	24
4.6.11 Engine Components	24
4.6.12 Rear Wheel Drive System	25
4.6.13 Electronics	25
4.6.14 Minimum Weight	25

4.6.15 Other Technical Rules	25
4.6.16 Exceptions	25
4.7 RC2 Class	25
4.7.1 Summary	25
4.7.2 Homologation Paperwork	26
5. VEHICLE LOG BOOKS.....	27
5.1 Issuing Log Books	27
5.1.1 Log Books Issued	27
5.1.2 One Log Book Per Vehicle	27
5.1.3 Log Book Issuer.....	27
5.1.4 Vehicle Description and Ownership History	27
5.2 Log Book Administration.....	27
5.2.1 Surrender At Scrutineering	27
5.2.2 Scrutineer Responsibilities	27
5.2.3 Protests	27
5.2.4 Damage To Be Noted in Log Book	27
5.2.5 Collect Log Book At End Of Event	27
5.2.6 Log Books Issued By Other Sanction Bodies	27
5.2.7 Failure To Present Log Book	28

1. COMPETITOR PERSONAL SAFETY EQUIPMENT

1.1 Helmets

1.1.1 Helmet Standards

Only helmets meeting one of the following standards will be accepted for competition in any performance rally and must be worn by all competitors when travelling on special stages:

- FIA Standards - 8860-2004, 8860-2010, 8859-2015, or 8860-2015
- Snell Foundation certification - SAH 2010, SA 2010, SA 2015, EA 2016, or SA 2020

For helmets with dual FIA/SA certification, the later expiration date shall take precedence.

Snell SAH 2010 and SA 2010 certified helmets will not be accepted after December 31, 2023 January 1, 2022.

FIA 8860-2004 certified helmets will not be accepted after December 31, 2021.

1.1.2 Scrutineering Failure

Helmets that do not pass Scrutineering will be confiscated and returned after the event. Helmets may fail Scrutineering due to non-compliance with the above standards or for not being in good condition as evidenced by cracks, frays, punctures or other defects.

1.2 Frontal Head Restraint

1.2.1 Frontal Head Restraint Standards

Each competitor must wear a Frontal Head Restraint system (FHR) which meets the following standards:

- HANS® system: HANS devices shall be approved according to FIA standards 8858- 2002 or 8858-2010. Consult the FIA Technical List n° 29 to see which HANS devices are approved by the FIA.
- Hybrid® system: Hybrid devices shall be approved according to FIA Standard 8858- 2010. Consult the FIA Technical List n° 29 to see which Hybrid devices are approved by the FIA.
- Other systems certified to SFI 38.1 Such devices must bear a SFI 38.1 conformance label that is less than five years old.

1.2.2 Tethers

Tethers for FIA Certified devices must be FIA approved. The Frontal Head Restraint system should be considered as an ensemble which involves the seat, the harnesses, the frontal head restraint unit, its tethers and helmet. For more details, "Guide for the use of HANS in International Motor Sport" published by the FIA Institute for Motor Sport Safety, can be found on www.fia.com under the heading FIA Sport – Regulations – Drivers' Equipment.

1.3 Driving Suits

1.3.1 Standards

All competitors shall wear at all times during the event, a one- or two-piece driving suit conforming to:

- FIA Standard 8856-2000 or 8856-2018
- FIA 1986 Standard
- SFI ~~3-2A/5~~ 3.2A/5 or 3.4/5 Specification
- SFI ~~3-2A/4~~ 3.2A/1 Specification with approved fire resistant underwear (FIA Standard 8856-2000 or SFI 3.3 Specification)

Suits that have had their homologation withdrawn may not be worn.

1.3.2 Usage

No other garments worn over driving suits are acceptable on special stages. The suit and applicable undergarments shall be presented at technical inspection in a clean and presentable condition. Driving suits must effectively cover the body from the neck to the ankles and wrists and be in good condition, free of defects, holes, cracks, frays, etc.

1.3.3 Footwear

All competitors must wear shoes and socks while on stage. The shoes must cover the entire foot and be of leather or approved fireproof material. Socks may not be manufactured of synthetic fiber except for Nomex or similar fire resistant material.

2. ELIGIBILITY OF VEHICLES AND EQUIPMENT

These regulations shall apply to vehicles competing in rallies which contain special stages. Vehicles must comply with these regulations at all times during the competition.

2.1 Definitions

2.1.1 Interior bodywork

Cockpit and trunk.

2.1.2 Exterior bodywork

All the entirely suspended parts of the car latched by the airstream.

2.1.3 Chassis

The overall structure of the car around which are assembled the mechanical components and the bodywork including any structural part of the said structure.

2.1.4 Vehicle Weight

The real weight of the car without the occupants or their worn safety gear. Vehicles may be weighed at any point during an event.

2.1.5 Model

A model is a basic manufacturer's designation (e.g.: Subaru Impreza, Volkswagen Golf, Ford Focus, Mitsubishi Lancer, etc.).

2.1.6 Model variant

A model may exist in several variants as to bodywork (i.e.: 2 door sedan, 4 door sedan, coupe, station wagon etc.) or with regard to mechanical components (e.g.: WRX, WRX STI, etc.).

2.1.7 Original equipment (OEM)

Original equipment is defined as all items of standard or optional equipment that could have been ordered with any particular bodywork variant of the model, installed on the factory production line, and delivered through a dealer in the U.S.A. This does not include special orders, "one-offs" or pre-production vehicles. Dealer installed options, except as required by manufacturer directives (no matter how common), are not included in this definition.

2.1.8 Generation

A generation is a model's particular design offered during a specific year or number of consecutive years. After producing an original model (e.g. First Generation: 1993-2001 Subaru Impreza, 1976-1979 Mitsubishi Lancer, 1998-2005 Ford Focus, etc.) manufacturers may develop significant changes or totally redesign the original model after producing it for a number of years. They classify this new/next design as the next generation of that model (e.g. 2nd. Generation: 2002-2007 Subaru Impreza, 1979-1987 Lancer, 2005-2011 Ford Focus, etc.).

2.2 Vehicle Safety Regulations

2.2.1 Road worthiness

All competing vehicles must be roadworthy and, the following items in particular must be adequate and functioning properly:

- Brakes
- Horn
- Windshield wipers
- All legally required exterior lights
- Tires, including all spares
- Exhaust system
- Catalytic Converter (if required)

2.2.2 Roll Over Protection

- a) Roll cages are mandatory for all vehicles.
- b) Specific roll over protection is subject to the approval of the scrutineer at each event.
- c) Basic design considerations
 - 1) The basic purpose of the roll over protection is to prevent serious body-shell deformation, and so reduce the risk of injury to occupants, in the case of a collision or of a car turning over. The essential features of safety cages are sound construction designed to suit the particular vehicle, adequate mountings and a close fit to the body-shell. The safety cage must not unduly impede the entry or exit of the driver and co-driver.
 - 2) All new vehicles with log books issued after January 1, 2009 must be fitted with a safety cage built to FIA Article 253 specifications or be FIA homologated under the latest international regulations and accompanied by original certification documentation (~~older homologated cages are not all valid for a newly built vehicle~~). See www.fia.com, under Sport, Regulations, International Sporting Code, Appendix J Article 253, Article 8.
 - a) New constructions of cages without windscreen supports, regardless of homologation or certification, when Art. 253-15 "dimension A" exceeds 200mm, will not be accepted for log booking.
 - b) Each roll cage foot may be welded directly to the primary structure of the vehicle.
 - c) Alternate material to CDS (Cold Drawn Seamless): Although FIA Article 253.8.3.3 specifies the safety cage material as CDS (Cold Drawn Seamless), DOM (Drawn-Over-Mandrel) tubing may be used as an alternate material in respect to the following: main roll bar, front roll bar, lateral roll bars, lateral half roll bars, their connections (drawings 253-1-3)

and one continuous door bar per side will be at least 1.75"x 0.095". All other parts of the safety cage will be at least 1.5" x 0.095".

- d) Alternate material to CDS (Cold Drawn Seamless): Although FIA Article 253.8.3.3 specifies the safety cage material as CDS, DOCOL R8 tubing may also be used as an alternate material in respect to the following: main roll bar, front roll bar, lateral roll bars, lateral half roll bars, their connections (drawings 253-1-3) and one continuous door bar per side will be at least 1.75"x.083". Diagonal members 253-7, additional door bars, windscreen supports 253-15, roof X 253-12, or diagonals 253-13, or 253-14 will be at least 1.5" x .083. If a transverse bar 253-29 is used, it will be at least 1.75" x 0.065". All other parts of the safety cage will be at least 1.5" x 0.065".

- 3) Existing log-booked rally vehicles that have roll cages built to 2006 Rally America roll cage specifications will remain valid for competition use until further notice.

Existing log booked rally vehicles with non-homologated roll cages built to the 2006 Rally America rules are subject to the following additional requirements:

- i. A sill bar and at least one more door bar is required on each side.
- ii. Diagonals to each corner of the top of the main hoop, whether in the plane of the main hoop or the rear stays are required.
- iii. A windscreen support from front cage foot (within 4 inches) to within 6 inches of the transverse windshield bar is required on each side.
- iv. Minimum size for these added elements is 1.5" x 0.095".

2.2.3 Protective Padding

All tubing forward of the main hoop in the roofline must be padded. Any other tubing which may contact the helmet while seated must also be padded. Padding must comply with FIA Standard 8857 2001, type A (see technical list n 23 "Roll Cage Padding Homologated by the FIA") or SFI 45.1 Specification.

2.2.4 Batteries

- 1) Batteries must be securely mounted.
- 2) If removed from the original location, all lead-acid batteries shall be mounted inside covered, non-conductive boxes and equipped with leak proof caps. The hot terminal shall be insulated in all vehicles. All batteries must be securely attached to the primary structure of the vehicle.

2.2.5 Master Electrical Disconnect Switch

- a) A spark-proof master electrical disconnect switch with the capability of disconnecting all electrical circuits shall be mounted in the passenger compartment. (The integrity of a fuel injection computer may be protected by supplementary wiring.)
- b) The location of the master electrical disconnect switch shall be that which makes it easily operable by either crew member or by persons outside the vehicle through

either front door and shall be marked with a label showing a red spark in a white-edged blue triangle with a base length of at least 4 inches.

- c) The switch must effectively shut down all systems including alternator and engine.

2.2.6 Windows

- a) The windshield shall be laminated safety glass.
- b) The competitor must be able to describe to the satisfaction of the Chief Scrutineer the ability to escape from the car with the doors closed. For vehicles equipped with glass side windows one or more window-breakers must be accessible to the driver and co-driver.
- c) Windows in the driver and co-driver doors must not be rolled down more than 1 inch during stages.
- d) Window safety nets must be used in lieu of having windows rolled-up during stages. (See illustration for proper window net installation). All window nets must meet FIA article 253 or SFI 27.1 certification.
- e) The use of translucent and colorless anti-shatter films is highly recommended in side and rear windows. The use of silvered or tinted anti-shatter films is also permitted. In all cases, the maximum tint shall be 50%.
- f) Glass side windows may be replaced with polycarbonate material of at least 3mm thickness. However, competitors must be able to display to the satisfaction of the Chief Scrutineer that the mounting of the substitute windows will allow both emergency escape from inside the car and access by rescue from the outside of the car.

2.2.7 Mud flaps

Required on all rear wheels and driving wheels.

2.2.8 Fuel, fuel tanks and lines

- a) Only unleaded fuels are allowed. Leaded fuel and lead additives are expressly prohibited.
- b) All fuel tanks and cells must be securely mounted to vehicle. Any fuel tank or fuel cell surface exposed on the bottom of the vehicle shall be equipped with a shield designed to prevent puncture or damage from stones, debris, and abrasion.

A fuel-resistant and fire-retardant plate or shield is required between the passenger compartment and the compartment(s) or area(s) in which the fuel tank, filler tube and fuel pump are located.
- c) The original fuel tank may be used provided it remains in the OEM location secured by original systems.
- d) The original fuel tank may only be replaced by an FIA- or SFI-approved fuel cell provided that:
 - i) The original fuel tank is removed.

- ii) The fuel cell is properly vented to outside the vehicle from the compartment in which it is located.
 - iii) Should the fuel cell and its filler be located in the luggage compartment, an outlet must be provided for fuel spilled in the compartment.
 - iv) Where fuel cells are installed in the passenger compartment of vehicles such as "hatchback" variants, 2.2.8.b above applies if the fuel cell filler is located in the passenger compartment.
 - v) There is no restriction on the size of the fuel tank.
- e) Supplementary fuel tanks are not permitted.
 - f) If fuel lines are re-routed through the passenger compartment, they shall be in compliance with the following:
 - i) Shall incorporate a metallic casing. (If the metallic casing is not exterior to the line, a verifiable sample must be presented at Scrutineering or be shown to comply with FIA Appendix J Art. 253.3.)
 - ii) Shall have a minimum of 200 psi rating. If fuel lines are routed through the passenger compartment by the manufacturer, they must be in compliance with this section.
 - iii) Shall not be mounted where it could be possibly crushed between a roll cage element and the body shell.
 - g) Fuel pumps shall be isolated from the driver/co-driver by a fireproof metal bulkhead.
 - h) All the fuel pumps must only operate when the engine is running, except during the starting process.

2.2.9 Towing eyes

Towing eyes shall be attached to the front and rear of the vehicle and painted in yellow, red or orange. If under the car, the location shall be identified by a fluorescent arrow.

2.2.10 Loose articles

All articles, which could be dangerous if left loose, must be securely restrained.

2.2.11 Door panels

Inside front door panels or edge trim are required to provide protection from metal edges.

2.2.12 Roofs

Movable metal sunroofs and/or roof panels must be fixed in the closed position. Sunroofs and/or roof panels of any other material must be replaced with metal of equivalent strength of the roof panel and must be fixed in the closed position by welding or steel fasteners.

2.2.13 Supplemental & Passive Restraints

Airbags and their associated equipment must be disabled or removed during competition in order to eliminate the possibility of the airbag inflating accidentally. It is recommended that passive restraint systems be disabled.

2.2.14 Ground Clearance

All parts of the vehicle, other than the tires, must have a minimum of 2 inches clearance from a level road surface.

2.2.15 Power Door Locks

For all classes, power door locks must be rendered inoperative.

2.2.16 Steering Locking Device

For all classes, steering locking devices must be rendered inoperative.

2.2.17 Exhaust system

- a) The allowable sound level is 105 dB, on the A scale, as measured 18" from either side of the exhaust outlet at an angle of 45 degrees from and at the same height of the exhaust outlet. The engine shall be running at a minimum of 2500 RPM. The area within a 50' radius shall be on level ground and clear of man-made obstructions. Any anti-lag system should be turned off.
- b) Unless a car was manufactured before a catalytic converter was required in the U.S.A., then a functioning catalytic converter must be retained or installed. (Burden of proof that a catalytic converter is not required for a particular vehicle rests with the competitor and should be furnished to the ARA Competition Director so that an exemption waiver may be added to the Vehicle Log Book.)

2.2.18 Hoods

Hoods shall be fixed closed with hood pins accessible from the outside. Other fastening devices (inside or outside) shall be rendered inoperative, except for the secondary catch, which may be retained.

2.3 Vehicle Safety Equipment

2.3.1 Seats

- a) The use of hinged-back and OEM seats is prohibited.
- b) All the occupants' seats must be homologated by FIA Standards 8855-1999 or 8862-2009, or be specifically designed for motor racing. All non-FIA seats are subject to acceptance by the Chief Scrutineer.

2.3.2 Seat Mounting

Seats must be securely attached to the structure of the vehicle in such a manner as to prevent the movement of the seat in case of an accident. Seats may not be mounted with sliders.

2.3.3 Safety Harness

- a) A five, six or seven point unmodified safety harness of proprietary manufacture, meeting the specifications below, shall be fitted for both crew members.
- b) All harness systems must be capable of being released through one latch.
- c) The harness shall be worn at all times when the car is in motion on a special stage and on all transits when legally required in the State being driven in.
- d) Safety harness will meet one of the following standards:
 - FIA Standard 8853/98 or 8853/2016 and currently appear as valid on the current respective FIA Technical List at www.FIA.com
 - SFI 16.1 Specification and display a manufacturer appearing on the current respective list of SFI 16.1 manufacturers at www.SFIfoundation.com
 - SFI 16.5 Specification and display a manufacturer appearing on the current respective list of SFI 16.1 manufacturers at www.SFIfoundation.com
- e) Safety harnesses may not be used after their expiration date. For harnesses with dual FIA/SFI certification, the later expiration date shall take precedence.
- f) It is not permitted to mix parts of seat belts. Only complete sets may be used.
- g) The material of all straps shall be in new or perfect condition.
- h) The belts must be equipped with turnbuckle, push button or latch/link release systems.

2.3.4 Safety Harness Installation

- a) The locations of the safety harness anchorage points must be as shown in the SFI Seatbelt Installation Guide (available from www.sfifoundation.com), section 6.2 (Installation) of FIA Appendix J, Article 253, or the harness manufacturer's instructions. If the manufacturer's instructions are used, they must be provided upon demand at scrutineering.
- b) It is prohibited for the seat belts to be anchored to the seats or their supports.
- c) If the manufacturer provides for safety wiring the locking bale to prevent accidental unfastening of the belts from their anchorage points, then it shall be necessary for the all such components to be safety wired.
- d) The straps may be attached by looping or by screws, but in the latter case an insert must be welded for each mounting point. These inserts will be positioned in the reinforcement tube and the straps will be attached to them using bolts of M12 8.8 or 7/16 inch UNF specification.
- e) For each new anchorage point created, a steel reinforcement plate with a surface area of at least 6 square inches and a thickness of at least 1/8 inch must be used.
- f) The effectiveness and longevity of safety belts are directly related to the manner in which they are installed, used and maintained. The belts must be replaced after every severe collision, and whenever the webbing is cut, frayed or weakened due to the actions of chemicals or sunlight. They must also be replaced if metal parts or

buckles are bent, deformed or rusted. Any harness which does not function perfectly must be replaced.

2.3.5 Fire extinguishers

These rules are in effect from June 1, 2021 onward:

- a) All competition vehicles must be equipped with all of the following:
- i) An “on-board” system that uses either manual or automatic activation.
- 1) All bottles will be secured using a metal strap and have a fill gauge that is visible for Scrutineering. Activation point for the fire system must be located within easy reach of the driver and co-driver when seated.
 - 2) All such systems will be installed and serviced in accordance with the manufacturer’s instructions.

Installed system must meet one of the following standards:
 - SFI Spec 17.1 and display a manufacturer appearing on the current respective list of SFI Spec 17.1 manufacturers at sfifoundation.com
 - FIA 8865-2015
 - Currently listed as homologated for Rally on Technical List 16 of the FIA website (fia.com)
 - 3) The fire system cylinder shall be securely fastened, in such a manner that it can be checked during a technical inspection and may be removed periodically for weighing.
 - 4) All on-board systems shall be identified with 2 circle “E” decals one at the release location and the second on the outside bodywork in line with or as near to the release location as possible.
- ii) Two hand held fire extinguishers with a minimum UL rating of 10 BC each or one hand held extinguisher with a minimum UL rating of 20BC.
- 1) All bottles will be secured using a metal strap and have a fill gauge that is visible for scrutineering.
 - 2) Each must be installed inside the passenger compartment. During installation, consideration must be given to quick release and security of attachment.
 - 3) One fire extinguisher must be located within easy reach of the driver or co-driver when seated.
 - 4) The following are considered equivalent substitutes for one 10-B:C hand held extinguisher:

Minimum quantity of extinguishant:
 - AFFF 2.4 liters
 - FX G-TEC 2.0 kg
 - Viro3 2.0 kg
 - Novec 1230 2.0 kg

- b) If a dry powder unit is used, the unit must bear certification that it has been serviced annually. All extinguishers shall be equipped with a visible indication of the state of charge. All extinguishers shall be approved for vehicular use by the DOT, U.S. Coast Guard, SFI or FIA.
- c) A fire extinguisher label must be placed on the outside of the vehicle, on a non-glass surface, at the nearest point of access to a fire extinguisher.

These rules are in effect until June 1 2021:

- a) All competition vehicles must be equipped with one of the following:
 - i) An “on-board” system that uses either manual or automatic activation along with one hand held bottle.
 - 1) All bottles will be secured using a metal strap and have a fill gauge that is visible for Scrutineering.
 - 2) All such systems will be installed and serviced in accordance with the manufacturer’s instructions. In addition, a hand-held extinguisher of at least 10 B:C rating shall be installed in accordance with 2.3.5.b below.
 - 3) The fire system cylinder shall be securely fastened, in such a manner that it can be checked during a technical inspection and may be removed periodically for weighing.
 - 4) All on-board systems shall be identified with 2 circle “E” decals one at the release location and the second on the outside bodywork in line with or as near to the release location as possible.
 - ii) Two hand held fire extinguishers with a minimum UL rating of 10 BC each.
 - 1) All bottles will be secured using a metal strap and have a fill gauge that is visible for scrutineering.
 - 2) Each must be installed inside the passenger compartment. During installation, consideration must be given to quick release and security of attachment.
 - 3) One fire extinguisher must be located within easy reach of the Driver or Co-driver when seated.
- b) If a dry powder unit is used, the unit must bear certification that it has been serviced annually. All extinguishers shall be equipped with a visible indication of the state of charge. All extinguishers shall be approved for vehicular use by the DOT, U.S. Coast Guard, SFI or FIA.
- c) A fire extinguisher label must be placed on the outside of the vehicle, on a non-glass surface, at the nearest point of access to a fire extinguisher.

2.3.6 First Aid Kit

- a) A comprehensive first aid kit shall be carried in the passenger compartment.

- b) The first aid kit must be easily accessible, clearly identified and the complete kit easily/quickly removable by hand. It is recommended that the first aid kit be accessible from both sides of the car and from the seated position.
- c) A first-aid kit label must be placed on the outside of the vehicle, on a non-glass surface, at the nearest point of access to a first-aid kit.

2.3.7 Warning Devices

Three self-supporting, light-reflecting, daylight-visible triangular warning devices of a minimum size of 12 inches per side shall be carried in the vehicle. One of these must be located within easy reach of the driver or co-driver when seated.

Warning devices must be permanently marked with crew's assigned car number.

2.3.8 Tow Rope

All vehicles must carry a tow rope or winch with cable. All parts of the tow rope must be within the competition vehicle at all times while the tow rope is not in use.

2.3.9 Camera and Camera Mounts

Camera mounts and their attachment to the vehicle shall be of a safe and secure design which would prevent either driver from being able to strike any part of the mount. As well, the camera shall be secured at a minimum of two different points.

2.3.10 Belt Cutters/Glass Breakers

One or more belt cutters and glass breakers must be carried in the vehicle within reach of both driver and co-driver while safety harnesses are being worn. The seat belt cutter must be designed specifically for cutting seat belts.

2.3.11 Spill Kit

All vehicles in ARA events must carry a spill kit consisting of at least: a minimum of 2 - 15" x 19" (standard) absorbent pads, 1 - 3" x 48" hydrocarbon absorbent sock, and a 13 gallon plastic bag. All items will be contained in a heavy duty plastic bag that is re-sealable.

3. GENERAL REGULATIONS

3.1 Bodywork

3.1.1 Good Appearance

Bodywork must be without visible damage or perforation from corrosion which would detract from the good appearance of the vehicle.

3.1.2 Bumper Location

The general shape and location of bumpers may not be changed.

3.1.3 Tires Covered

Tires must be fully covered when viewed from above.

3.1.4 Spoilers

Spoilers, plates or wings may not extend beyond the body as viewed from above nor extend above the roof line by more than 3 inches when viewed from the side. Devices forward of the windshield must be below the hood line when viewed from the side. ARA technical inspectors reserve the right to refuse any aerodynamic component based on safety concerns.

3.1.5 Paintwork

Paintwork must be finished and of neat appearance. Primer paint is not acceptable.

3.2 Identification of Vehicles and Crew

3.2.1 Vehicle Graphics Standards

All competing vehicles in stage events shall be identified in accordance with the ARA Visual Package, described on the ARA web site.

~~All competing vehicles in stage events shall be identified in accordance with the 2018 ARA Vehicle Graphics Standards.~~

3.2.2 Door Reserved Space

An area 24 inches wide by 20 inches high, starting with the lead edge of the front doors and from the top of the door panel downwards shall be reserved for exclusive use for the installation of the ARA door panels and Event Sponsor decals. Door numbers shall meet Vehicle Graphics Standards.

3.2.3 Competitor Identification

The name of the driver and the co-driver must appear on the rear side windows of the car as shown in the Standards. Letters for the crew's names must be white, 2 inches in height in upper and lower-case Helvetica bold face. The national flag of each crew member must appear adjacent to the name.

3.2.4 Windscreen Banner

The top 4 inches of the windscreen is reserved for use by ARA and/or its sponsors. No other advertising is permitted anywhere on the windshield. Competitors have the option

of installing a solid black background at the top of the windshield. The sponsor's decal is installed over this background.

3.2.5 Hood Reserved Space

An area 24 inches wide by 10 inches high at the front center of the hood is reserved for the exclusive use of the ARA Series Sponsors.

3.3 Lights

3.3.1 Compliance With State Requirements

Headlights must comply with the legal requirements of the state of registration.

3.3.2 Headlights

A headlight shall be considered as any lighting device throwing a beam toward the front of the vehicle (low-beam, high-beam, fog lamp). Auxiliary headlights may be installed. These lights may be fitted into the bumpers, radiator grillwork or the front part of the bodywork, provided that such openings as needed in this case are completely filled by the lights fitted. All auxiliary lights shall be mounted no higher than the top of the hood.

3.3.3 Manufacturer-fitted Fog Lights

It must not be possible to operate any manufacturer fitted fog lights fitted without the front marker lights and tail lights operating.

3.3.4 Reversing Lights

All reversing lights may only switch on by engaging reverse gear.

3.4 Tire studs

Studs or other hard material devices inserted into the tire are not permitted unless approved studs are allowed under local state law and as detailed in the event Supplementary Regulations.

3.5 Documentation

The following documentation shall be carried in the vehicle at all times:

- Vehicle registration
- Proof of third party liability insurance covering the entered vehicle

3.6 Canadian Vehicles

3.6.1 Vehicle Class

Canadian vehicles entered in ARA rallies shall be classified by ARA vehicle class regulations.

3.6.2 Vehicle Eligibility

The vehicle must be based on a model built by a recognized manufacturer. The manufacturer must be listed in the NADA Official Used Car Guide. It is the intent of these rules that all vehicles be based on production vehicles. Eligibility is restricted to street-licensed, closed-bodied vehicles. Non-production-based vehicles built from the ground up, are explicitly prohibited.

3.7 Restricted Novice Driver Vehicle Requirements

3.7.1 Novice Restrictors

Restricted Novice drivers, as defined elsewhere, must use a Novice Restrictor on all forced induction competition vehicles over 1600cc, and all normally aspirated competition vehicles over 2700cc. Novices will also be restricted when competing in under 1600cc forced induction or under 2700cc normally aspirated competition vehicles with exceptional performance potential, as judged by ARA. Some examples of under 1600cc forced induction or under 2700cc normally aspirated vehicles with exceptional performance potential:

- a) Group 4-style Ford Escort or similar (Millington, BDG, etc.)
- b) FIA Super 2000 cars
- c) F2 Category cars
- d) R5 Category cars

3.7.2 Forced Induction Novice Restrictor

When required for a novice driver, the forced induction restrictor used will be as described below.

- a) The restrictor must be located and have a minimum width as otherwise stated in RTR 4.2.5.a 4.2.5.4 (also applies to 2wd vehicle).
- b) The restrictor maximum inside diameter is to be 30mm.
- c) If a car is fitted with multiple induction systems, then the total combined area of all restrictors cannot exceed the area of a single 30mm restrictor.

3.7.3 Normally Aspirated Novice Restrictor

When required for a novice driver, the normally aspirated restrictor used will be as described below:

- a) Flat plate intake restrictor mounted between the throttle body and intake manifold.
- b) Restrictor must be of steel or aluminum, 55mm round ID max, maintained for at least 1.5mm and not radiused to the flat edge.
- c) The opening must be round and centered with the throttle body. If an adapter is needed for throttle plate clearance, it must be the same diameter as the throttle bore ^[SEP] and not create a radius into the restrictor.
- d) All engine combustion chamber air (and possibly fuel) must pass through the center hole of the plate.
- e) The restrictor plate shall be securely mounted on the bolts or studs used to mount the throttle body or carburetor.
- f) Carburetor restrictor plates may have multiple holes lined centered with venturis.
- g) If multiple holes are used, their area must be no greater than the sizes above.

Table A – Class, Engine Type, Maximum Displacement, Restrictor, Minimum Weight

Class	Engine	Max. Disp.	Restrictor	Min. Weight
Open 4WD	Forced induction	2600	34mm @ 27 PSI	2900
	Nat. aspirated	3320 3300	none	2900
	Nat. aspirated	4500	none	2900 3200
	Nat. aspirated	6300	Subject to Technical Review of specific engine proposals	2900 3200
Naturally Aspirated 4WD	Nat. aspirated	2500	none	2500 2600
	Nat. aspirated	3320 3300	none	2900
Limited 4WD	Forced induction	3000	34mm @ 27 PSI	3100
	Forced induction	3000	36mm @ 22 PSI	3100
	Nat. aspirated	2800	none	3100
	Nat. aspirated	6300	none	3300
Open 2WD	Forced induction	1800	none	1950
	Forced induction	2600	none	2200
	Forced induction	3500	none	2800
	Rotary	2600	none	2200
	Nat. aspirated	1800	none	none 1950
	Nat. aspirated	4500	none	2100
	Nat. aspirated	6300	none	2800
Limited 2WD	Forced induction	1600	none	2300
	Nat. aspirated	2500	none	2200
RC2	Refer to applicable FIA regulations			

4. VEHICLE CLASSES

4.1 All Open Classes (Open 4WD, Naturally Aspirated 4WD, Open 2WD)

4.1.1 Class Displacement and Weight Rules

All class displacement and weight rules per Table A. The use of securely fixed ballast to complete the weight of the car is permitted.

4.1.2 Production-based

Must be a production-based chassis.

4.1.3 Factory Floor Pan and Firewall

Must retain a factory floor pan and firewall, modifications for alternate components is allowed.

4.1.4 Body Panels

Roof, A & B pillars must be metallic and retain factory profile. C pillars must retain factory profile. Fenders and quarter panels may be modified or replaced but must cover tires completely as viewed from above.

4.1.5 Wheelbase

Wheelbase may not be modified more than 3.0 inches +/- from factory specification.

4.1.6 Engine Location

Engine may be moved but the OEM engine location (in front or behind) in relation to driver must remain.

4.1.7 Fuel

Fuel must be Gasoline, Ethanol, or Diesel based.

4.1.8 Alternate Fuels

Alternative energy sources fuels (e.g., propane, battery electrical greater than 25V) must be pre-approved by ARA Technical Director Committee a minimum 45 days before its event. There is no assurance given that a request for a technical exception can be fully resolved within less than 45 days.

4.1.9 Electronically Controlled or Actuated Components

Unless noted herein as an exception the suspension, braking, gear change, clutch front and rear differential components may not be electronically controlled or actuated.

Active front differentials are allowed and subject to a 100lb weight penalty.

OEM electronic controls of OEM transmissions, clutches, and differentials may be allowed with prior approval from the ARA Technical Director.

A simple engine cut is permitted during a mechanically activated gear change.

Electronic actuation of reverse gear lockout is permitted.

4.1.10 Damper Bushings

Suspension dampers must be guided by solid bushings, roller bearings for liner guidance are not allowed.

4.1.11 Turbocharger and Exhaust Gasses

Turbocharger must only be driven by exhaust gasses only. No secondary injection of air, fuel, or otherwise except as allowed by the fresh air valve. Exhaust gasses are defined as a gas mixture exiting the combustion chambers of the engine. A connection between the intake and the exhaust manifold is not allowed.

A fresh air valve between the intake and exhaust systems is allowed provided the following conditions are maintained:

- a) All incoming air must pass through the intake restrictor(s)
- b) The total volume between the restrictor(s) and the butterfly (or butterflies) must not exceed 20 liters.
- c) Components required to actuate the fresh air valve may be added provided they serve no other purpose.

4.1.12 Bodywork

Driver and co-driver doors must be structurally unaltered. If the original structure has been removed or altered, either a door panel that is compliant with FIA drawing 255-14 must be installed or the safety cage must include a sill bar plus 2 continuous door bars containing four vertical studs. Homologated roll cages may not be modified. All sharp edges must be protected by a door panel, edge guard, or similar.

4.1.13 Exceptions

Any requests for exceptions to published rules must be submitted to the ARA Technical Director committee no less than 45 days before event. There is no assurance given that a request for a technical exception can be fully resolved within less than 45 days.

Tech@americanrallyassociation.org

4.2 Open 4WD Class

4.2.1 Non-compliant Vehicles

Vehicles which do not comply with current Open 4WD class rules including FIA vehicles may be allowed to compete -- competitors must request approval a minimum of 45 days prior to event.

4.2.2 Matching Engine, Transmission and Chassis

Engine, transmission and chassis manufacturer need not match.

4.2.3 Restrictors

Engines of displacement 4.5 – 6.3 liter must have a airflow restrictor no more than 50 mm from throttle body inlet as measured along centerline of airflow path. All air entering the engine must pass through the restrictor. Restrictor sizing will be established for specific engine proposals such that targeted engine output levels will not be exceeded.

Proposals to be submitted per 4.2.1 above. For normally aspirated engines, the throttle bore size may be specified in lieu of a restrictor.

4.2.4 Rotary Engines

Rotary engines are restricted to twin rotors and subject to a displacement multiplier of 1.8.

4.2.5 Turbocharger/Supercharger Restrictions

- a) Forced induction engines must have an air inlet orifice of 34mm diameter or less either through manufacture or by the use of a restrictor. This restrictor must have a minimum width (parallel to the air flow path) of 3 mm and must be located within 50 mm of the compressor wheel. All air entering the engine must pass through the restrictor.
- b) Must provide 1/8" female pipe fitting in the intake manifold plenum ~~within 40mm of MAP sensor~~ for ARA use. The Table A indicated manifold pressure limit is gauge pressure.
- c) If a car is fitted with multiple induction systems, then the total area of all ~~the two~~ restrictors cannot exceed the area of the restrictor listed Table A ~~above~~.
- d) Competitors must have in place a mechanism to allow the induction system to be sealed by the use of wire and ARA seals.
 - i) With the wire and seal in place, it must be impossible to access the restrictor without removing the wire and seal.
 - ii) The wire and seal cannot be installed without a detailed inspection of the restrictor.
 - iii) Competitors must be prepared to dismantle the induction system to allow for verification of compliance with the rule above.
- e) The storage of boost (i.e., an accumulator) is not permitted.

4.2.6 ~~Bodywork~~

~~Driver and co-driver doors must be structurally unaltered. If the original structure has been removed or altered, either a door panel that is compliant with FIA drawing 255-14 must be installed or the safety cage must include a sill bar plus 2 continuous door bars containing four vertical studs. Homologated roll cages may not be modified. All sharp edges must be protected by a door panel, edge guard, or similar.~~

4.2.6 Electronic Controls

Aside from the exceptions below, no type or form of electronic control is permitted for the following components: Suspension, braking, gear-change, clutch, front and rear differentials.

- a) Simple engine cut operating during a mechanically activated gear change is permitted.
- b) O.E electronic rear differential is permitted.

- c) An active front differential may be used, but it will result in the minimum weight for that competition vehicle being increased by 100 lbs.

4.3 Naturally Aspirated 4WD Class

4.3.1 Engine and Transmission

Engine must be normally aspirated. Engine block and chassis manufacturer must match. Transmission manufacturer is free.

4.3.2 Other Applicable Rules

Must conform to all 4WD Open Class rules except those pertaining to forced induction.

4.4 Limited 4WD Class

4.4.1 Drive Configuration

Vehicle must have been manufactured as 4WD.

4.4.2 Bodywork

Bodywork must be OEM with regard to materials and appearance. Vents for cooling or cabin airflow allowed.

4.4.3 Hoods

Hoods may be alternate materials.

4.4.4 Seam Welding and Strengthening

Seam welding and strengthening of suspension points are allowed.

4.4.5 Unibody

Unibody chassis must remain intact as manufactured without weight reductions. Mounting tabs and unnecessary brackets may be removed, but the major unibody structure must remain.

4.4.6 Tunnel

Tunnels may be modified to accommodate improved exhaust clearance or other required components.

4.4.7 Rear Subframe

Rear subframe must remain OEM. Only one suspension connection point per side may be moved.

4.4.8 Strut/Shock Towers

Strut/Shock towers may be raised upward no more than 3.5" in the axis of travel only. OEM tower walls must remain.

4.4.9 Front Doors

Front door structure cannot be modified, although interior door cards are free.

4.4.10 Wheel Tubs

No modifications of the wheel tubs. Rolling the wheel arches is allowed, no flaring.

4.4.11 Front and Rear Subframes

Front and rear subframes must be OEM. Strengthening is allowed by welding only. Material may only be added, none removed, must retain OEM profile.

4.4.12 Suspension Dampers

Suspension dampers are free except they must be guided by solid bushings (roller bearings for linear guidance are not allowed) and must use OEM (or raised per 4.4.8) mounting locations with front and rear hubs remaining OEM.

4.4.13 Hubs

Hubs may be otherwise altered to accommodate permitted modifications.

4.4.14 Control Arms

Control arms must maintain OEM mounting dimensions and geometry. Replacement arms must not add additional track width to the vehicle.

4.4.15 Engine and Manufacturer

Engine must have been normally available in the same model range from manufacturer.

4.4.16 Cylinder Head

Cylinder heads must be OEM and match the engine. Porting of cylinder heads or rotor housings is not allowed.

4.4.17 Valve Train Components

Valves and valve spring retainers must be OEM with respect to materials and dimensions. Camshafts and valve springs are free.

4.4.18 Crankshaft

Standard crank must remain OEM.

4.4.19 Turbocharger/Supercharger Restrictions

- a) Turbocharger including wheels, shafts and bearings must remain OEM or appear on the list of approved alternate turbochargers, which are subject to a 100 lb. weight penalty. Compressor housings may be modified the minimum amount necessary to accept a mandatory restrictor. Housings may be rotated.
- b) Turbochargers must be driven by exhaust gasses only. No secondary injection of air, fuel, or otherwise to maintain turbocharger speed. Exhaust gasses are defined as a gas mixture exiting the combustion chambers of the engine. A connection between the intake and the exhaust manifold is not allowed. The storage of boost (i.e., an accumulator) is not permitted.
- c) Forced induction engines must have an air inlet restrictor no greater than listed in Table A. This restrictor must have a minimum width (parallel to the air flow path) of 3 mm and must be located within 50 mm of the compressor wheel. All air entering the engine must pass through the restrictor. If a car is fitted with multiple induction systems, then the total combined area of all restrictors cannot exceed the area of the restrictor listed in Table A.

- d) Must provide 1/8-inch female pipe fitting in the intake manifold plenum ~~within 40mm of MAP sensor~~ for ARA use. The Table A indicated manifold pressure limit is gauge pressure.
- e) Competitors must have in place a mechanism to allow the induction system to be sealed by the use of wire and ARA seals. With the wire and seal in place, it must be impossible to access the restrictor without removing the wire and seal.
- f) The wire and seal cannot be installed without a detailed inspection of the restrictor.
- g) Competitors must be prepared to dismantle the induction system to allow for verification of compliance with the rule above.

4.4.20 Intercooler

The intercooler may be replaced and relocated within the original bodywork.

4.4.21 Throttle Body and Manifold

Throttle body, and manifolds are free.

4.4.22 Exhaust System

Exhaust system free. Must include catalyst and tail pipe must exit at the rear of the vehicle.

4.4.23 Engine Cooling System

Engine cooling systems are free but must remain in the OEM mounting location.

4.4.24 Flywheel and Clutch

Flywheel and clutch are free.

4.4.25 Transmissions/Transaxles

Transmissions and Transaxles do not need to match year and model.

4.4.26 Sequential Shift

Sequential shift allowed but is subject to a 100 lb. weight penalty.

4.4.27 Limited Slip Differential

An aftermarket LSD type locking diff is allowed.

4.4.28 Rear Drive System

The rear drive system must maintain the original design concept (i.e. live axle vs. IRS) and body mount locations but is otherwise free, including differential, ratio and housing.

4.4.29 Electronics

Electronics are free. No traction control, unless as fitted by manufacturer (OEM system).

4.4.30 Minimum Weight

Vehicles must meet minimum weight per Table A. The use of securely fixed ballast to complete the weight of the car is permitted.

4.4.31 Other Technical Rules

Vehicles must conform to all other applicable ARA Technical Rules.

4.4.32 Exceptions

Exceptions to these rules, especially to vehicles built prior to the 2018 season must be requested to the ARA Technical Director ~~technical committee~~ no less than 45 days before the event. There is no assurance given that a request for a technical exception can be fully resolved within less than 45 days.

~~Requests may be made to: tech@americanrallyassociation.org.~~

4.4.33 Water Injection

Water injection is prohibited.

4.4.34 Dry Sump

Dry sump oil systems may only be used if it is OE for the car.

4.5 Open 2WD Class

4.5.1 Drive Configuration

Car must be 2WD.

4.5.2 Rotary Engines

Rotary engines are restricted to twin rotors and subject to a displacement multiplier of 1.8.

4.6 Limited 2WD Class

4.6.1 Drive Configuration

Vehicle must have been manufactured as 2WD.

4.6.2 OEM Bodywork

Bodywork must be OEM with regard to materials and appearance. Vents for cooling or cabin airflow allowed.

4.6.3 Seam Welding and Strengthening

Seam welding and strengthening of suspension points are allowed.

4.6.4 Unibody

Unibody chassis must remain intact as manufactured without weight reductions. Mounting tabs and unnecessary brackets may be removed, but the major unibody structure must remain.

4.6.5 Chassis Modifications

Tunnels may be modified to accommodate improved exhaust clearance or other required components.

- a) Rear subframe must remain OEM. One suspension connection point only may be moved.

- b) Strut/Shock towers may be raised upward no more than 3.5" in the axis of travel only. OEM tower walls must remain.
- c) Front door structure cannot be modified, although interior door cards are free.
- d) No modifications of the wheel tubs. Rolling the wheel arches is allowed, no flaring.

4.6.6 Cross-members

Front and rear cross-members must be OEM. Strengthening is allowed by welding only. Material may only be added, none removed, must retain OEM profile.

4.6.7 Suspension Dampers

Suspension dampers are free except they must be guided by solid bushings (roller bearings for linear guidance are not allowed) and must use OEM (or raised per 4.6.5.b above) mounting locations with front and rear hubs remaining OEM.

4.6.8 Hubs

Hubs may be otherwise altered to accommodate permitted modifications.

4.6.9 Control Arms

Control arms must maintain OEM mounting dimensions and geometry. Replacement arms must not add total track width to the vehicle.

4.6.10 Engine Limitations

- a) Engine must have been normally available in the same model range from manufacturer.
- b) Cylinder heads must be OEM and match the engine. Porting of cylinder heads or rotor housings is not allowed.

4.6.11 Engine Components

- a) Valves and valve spring retainers must be OEM with respect to materials and dimensions. Camshafts and valve springs are free.
- b) Standard crankshaft must remain OEM.
- c) Rotary engines are restricted to twin rotors and subject to a displacement multiplier of 1.8. Peripheral porting is not permitted.
- d) Dry sump oil systems may only be used if it is OE for the car.
- e) Turbocharged engines must use OEM turbo and waste gate hardware. Turbo engines must have been factory equipped with turbocharger.
- f) Turbochargers must be driven by exhaust gasses only. No secondary injection of air, fuel, or otherwise to maintain turbocharger speed. Exhaust gasses are defined as a gas mixture exiting the combustion chambers of the engine. A connection between the intake and the exhaust manifold is not allowed. The storage of boost (i.e., an accumulator) is not permitted.
- g) The intercooler may be replaced but must utilize the original mounts in their original locations.

- h) Throttle body, and manifolds are free.
- i) Forced induction engine injectors must be OEM for the engine.
- j) Exhaust system free. Must include catalyst and tail pipe must exit at the rear of the vehicle.
- k) Engine cooling systems are free but must remain in the OEM mounting location.
- l) Flywheel and clutch are free.
- m) Transmissions and Transaxles do not need to match year and model.
- n) No sequential shift allowed.
- o) An aftermarket LSD type locking diff is allowed.

4.6.12 Rear Wheel Drive System

The rear drive system must maintain the original design concept (i.e., live axle vs. IRS) and body mount locations but is otherwise free, including differential, ratio and housing.

4.6.13 Electronics

Electronics are free. No traction control, unless as fitted by manufacturer (OEM system).

4.6.14 Minimum Weight

Vehicles must meet minimum weight per Table A. The use of securely fixed ballast to complete the weight of the car is permitted.

4.6.15 Other Technical Rules

Vehicles must conform to all other applicable ARA Technical Rules.

4.6.16 Exceptions

Exceptions to these rules, especially to vehicles built prior to the 2018 season must be submitted requested to the ARA Technical Director technical committee no less than 45 days before the event. There is no assurance given that a request for a technical exception can be fully resolved within less than 45 days.

~~Requests may be made to: ararallytech@americanrallyassociation.org.~~

4.7 RC2 Class Vehicles

4.7.1 Summary

Vehicle conforming to ~~2018~~ FIA rules for the following vehicle categories are eligible to compete in the RC2 Open 4WD class:

- Group Rally2 (VRa2) and Group R5 (VR5)
Vehicles Group R5 cars conforming to the 2019 Appendix J 2021, Art. 261
- Group R4 (VR4)
 Group R4 cars conforming to the ~~2019~~ Appendix J 2018, Art. 260
 Cars fitted with R4 Kit conforming to the ~~2019~~ Appendix J 2021, Art. 260E
- Group NR4 over 2000cc (current N4)
 Group N cars conforming to the ~~2019~~ Appendix J 2019, Art. 254

- S2000-Rally: 1.6T engine with a 28mm restrictor
 - Super 2000-Rally cars (conforming to ~~the 2013~~ Appendix J 2013, Art. 255A) fitted with a restrictor complying with Art. 255A-5.1.1-b except for the following points:
 - a) The maximum internal diameter of the restrictor is 28mm,
 - b) The external diameter of the restrictor at its narrowest point must be less than 34mm. The diameter must be maintained over a distance of 5mm to each side of the narrowest point.
 - The diameter of the turbo compressor restrictor may be revised by the FIA at any time without notice.
- S2000-Rally: 2.0 atmospheric Super 2000 cars (conforming to ~~the 2013~~ Appendix J 2013, Art. 254A)

4.7.2 Homologation Paperwork

All entrants in RC2 Class must be prepared to present any and all homologation documents pertaining to their vehicle upon demand at any time. This can be in electronic or hard copy format.

5. VEHICLE LOG BOOKS

5.1 Issuing Log Books

5.1.1 Log Books Issued

A standard ARA Vehicle Log Book shall be issued as requested for any new vehicle builds. Log books remain with the vehicle, including changes of ownership.

5.1.2 One Log Book Per Vehicle

Only one log book is issued to each vehicle (other than by way of extension or replacement) and the possession of two log books for one vehicle at one time shall be deemed a breach of the GCRs.

5.1.3 Log Book Issuer

The log book is issued by an ARA authorized Technical Inspector.

5.1.4 Vehicle Description and Ownership History

A complete description of the vehicle is to be entered in the places provided. All changes of ownership of the vehicle must be recorded as provided.

5.2 Log Book Administration

5.2.1 Surrender At Scrutineering

At each event, the log book must be surrendered to the Chief Scrutineer at Scrutineering with the signature of the driver/entrant for that event in the space provided.

5.2.2 Scrutineer Responsibilities

During Scrutineering, any deviations should be noted by the Chief Scrutineer. All log books may be retained by the Chief Scrutineer.

5.2.3 Protests

If a car is protested during an event, the results of this protest ~~must~~ may be noted in the log book by the Steward(s).

5.2.4 Damage To Be Noted in Log Book

If, during an event, the vehicle is involved in an accident or is damaged due to mechanical failure, the damage ~~is to~~ may be noted in the Vehicle Log Book by the Chief Scrutineer.

5.2.5 Collect Log Book At End Of Event

It is the responsibility of the entrant to collect the log book at the end of the event. The Chief Scrutineer will release all log books once the steward "opens" the "end of event" Parc Fermé.

5.2.6 Log Books Issued By Other Sanction Bodies

SCCA/RA/NASA/CARS and other recognized ASNs Vehicle Log Books will be accepted at all ARA rallies. All competition vehicles must still pass ARA Scrutineering.

5.2.7 Failure To Present Log Book

Failure to present the Vehicle Log Book at Scrutineering will result in a \$25.00 fine which must be paid in full before the offending entrant will be allowed to start the event.