D1 Regulations Appendix-C2

Revised January 1, 2024

D2 Vehicle Regulations

These rules apply to the fabrication and modification of competition vehicles participating in D1 competitions. For the purpose of ensuring the safety of competitions and maintaining the development and characteristics of D1 competitions, the necessary items as vehicle rules for the D1 Middle Category are defined as follows.

The D1 ASSOCIATION reserves the right to establish rules for these regulations, and any changes for the purpose of ensuring safety may be applied immediately without notice.

1. general provisions

- 1.1) Items not explicitly mentioned in these Regulations must meet the requirements of Article 252 and Article 253 of J of the FIA Supplementary Regulations. Any modifications not specified as permitted modifications in these rules and regulations are prohibited.
- **1.2)** In the event that any of the items listed in these regulations conflict with FIA Supplementary Provision J, Articles 252 and 253, the items listed in these regulations must be followed.
- 1.3) Permitted or required changes and additions
 - Regardless of whether or not a car is officially recognized or registered with the FIA and ASN, FIA Supplementary Regulations J, Articles 252 and 253 shall apply, but the articles presented in these Regulations shall take precedence over such articles, and all modifications not expressly permitted by these Regulations are prohibited. Any modifications that are permitted must not be accompanied by modifications that are not permitted.
- **1.4)** All vehicles participating in the competition must be certified by the Participant as conforming to these rules.
- 1.5] It is the duty of each Participant to ensure that his/her vehicle not only conforms to these rules at all times during the competition, but also that it is maintained and inspected to ensure that it is in safe condition for competition at all times.
- 1.6) If the technical committee members determine that any modification or installation is unsafe from the standpoint of ensuring safety and instruct the participant to make improvements, the participant must follow the instructions.

2. base vehicle

2.1) The vehicle must be a mass-produced vehicle manufactured and sold by an automobile manufacturer.

2.2) FR, MR, RR, and FF drive systems are allowed.

- **2.3)** All participating vehicles must have a temporary cancellation certificate and must present the original certificate at the time of the first vehicle inspection each year.
- 2.4) Vehicles manufactured by automobile manufacturers for the purpose of race entry (sold or produced on the premise that they are not registered) are not permitted. In addition, it is the participant's obligation to prove that the vehicle in guestion is a regular after-

maddition, it is the participant's obligation to prove that the vehicle in question is a regular aftermarket vehicle in order to qualify as a base vehicle for the competition.

3. basic requirements for competition vehicles

- **3.1)** The vehicle must be a stock body manufactured by the automobile manufacturer and must be able to confirm the VIN number stamping.
- **3.2)** The weight of the competition vehicle shall be between 1000 kg and 1550 kg. No vehicle shall exceed 5000 mm in length, 2000 mm in width, and 1500 mm in height.

Competition vehicle weight is defined as the weight of the vehicle during the entire duration of the competition, excluding the driver.

It cannot exceed the maximum catalog vehicle weight during the standard vehicle type.

3.3) When competing, the vehicle must be equipped with at least two seats (driver and front passenger). Competition vehicles must not be equipped with seats other than these two seats.

3.4) Open-top cars must be equipped with a hard top.

3.5) Any appearance that differs significantly from the production car is not allowed.

3.6) Competition vehicles must be certified by the entrant to conform to these vehicle rules.

3.7) Competitors' vehicles must not have any equipment that may make them legally incompatible.

4. engines

4.1) Engine and displacement

Engines that are composed of parts for mass-produced vehicles are allowed to be used. There are no restrictions on engine displacement, and engines will not be classified accordingly.

4.2) Fuel

Fuel used must be unleaded gasoline or diesel fuel produced by an oil company and sold at regular gas station pumps in Japan.

4.3) Engine Conversion

When replacing an engine with a different engine type, it is permitted to use an engine within the model lineup of a mass-produced vehicle or to replace the engine in another mass-produced vehicle on the market. The converted engine must fit completely within the engine compartment of the standard car. In addition, the front axle weight of the competition car must not exceed 120% of the basic car.

- **4.3.1)** When converting an engine, cutting other basic monocoque including the main frame is not allowed in the body modification (including body cutting) as stipulated in 12.2) of this rule.
- **4.3.2**) When a car with a modified engine is entered, the entry will not be accepted unless clear photographs are submitted and approved showing a full view of the engine compartment, how the engine is mounted, and its relationship to the car body, including members and bulkheads.
- **4.3.3)** When building a new car with a new engine, a detailed description of the modification points with engine modification plans and a list of modification items (engine mount manufacturing method, manufacturer, etc.) must be submitted to D1JO. After receiving approval, the modification work must begin, and detailed photographs of the manufacturing process (manufacturing status) must be submitted to D1JO before the engine is installed, and photographs of the engine room and engine mounting method (engine mounts alone and when installed), and clear photographs taken immediately after completion so that the members and other parts of the vehicle's underside can be confirmed. The vehicle will not be allowed to undergo official vehicle inspections unless these photos are submitted to the D1JO immediately after completion.

5. additional engine equipment

5.1) Any additional supercharger may be added.

- **5.2)** A valid air cleaner must be installed, even if a funnel is installed on an independent throttle such as a 4-throttle throttle.
- 5.3) Nitrous oxide gas injection systems (NOS, etc.) are not permitted.
- **5.4)** The basic arrangement of the radiator from the engine compartment to outside the engine compartment, etc. must not be changed.
- 5.5) An oil cooler may be installed, but the mounting position method must be considered to prevent oil leakage due to collisions, etc.

5.6) Engine oil catch tank

- **5.6.1**) An engine oil catch tank must be installed, and only an engine oil catch tank with a capacity of 2 liters or more and made of metal is allowed.
- 5.6.2) Blow-by gases must be closed (open to the atmosphere is not allowed). The outlet of the oil catch tank must be connected to a suction pipe or similar (inside the engine) to return blow-by gas.
- 5.6.3) The engine oil catch tank shall be mounted in the engine compartment.
- **5.6.4)** Temporary oil catch tank mounting methods such as wire or tape shall be prohibited. In addition, the oil catch tank must have a reliable function to prevent oil from spilling onto the track and into the car body.
- **5.6.5)** Hoses used must be oil- and heat-resistant, and must have disconnection and heat protection measures. They must be secured independently from other piping.
- **5.6.6)** Engine oil level gauges must be equipped with a retaining device.
- 5.7) Water spray on the heat exchanger is permitted, but the structure must be such that there is no significant leakage of water outside the vehicle. Up to 5 liters of liquid for auxiliary cooling purposes (water spray) may be carried on board, and must be securely fastened.

6. fuel tank

- 6.1) When relocating or changing fuel tanks, only FIA or JAF approved or SFI Spec. 28.2 or higher safety fuel tanks are allowed. In addition, the safety fuel tank must have an approved label or certificate issued by the manufacturer, and in no case may it be used for more than 7 years from the date of manufacture.
- 6.2) Effective insulation must be provided around the fuel tank and muffler exhaust pipe.
- **6.3)** If a separate fuel collector tank is installed, it must have a maximum capacity of 5 liters, and if installed inside the cabin, it must be securely sealed with a metal bulkhead.

7. exhaust system

7.1) Exhaust volume must not exceed 113db on the A scale as measured at the trackside during competition. However, the exhaust volume limit may change depending on the venue used, in which case it will be stated in the Special Regulations for the event in question.

7.2) Exhaust catalysts are mandatory.

- 7.3) Exhaust gas must not be released to the atmosphere from the wastegate (exhaust gas around the engine compartment), but must merge into the exhaust pipe, or face backwards behind the fuel tank, or sideways behind the wheelbase center.
- **7.4)** The exhaust outlet must be located at the rear end of the vehicle. No combustible materials may be placed near the exhaust outlet.

7.5) Exhaust outlets must face backwards or downwards and must not protrude beyond the outside of the vehicle within the overall length of the vehicle.

8. transmission and differential

- 8.1.1) The transmission may be changed freely, but must have a rearward traveling function. Modifications to the floor and other parts of the vehicle due to transmission changes are permitted to the extent that the modifications do not exceed the punching out and reinforcement of the interfering parts. If modifications or reinforcements are required to the monocoque or members, including the bulkhead, transmission tunnel, or floor, the modification plan and list of modification items must be submitted to D1JO in advance with a "Detailed Description of Modification Areas" and must be approved before the modification work begins. In addition, detailed photographs of the modification work in progress (production status) and photographs of the modification work after completion must be submitted to D1JO immediately after completion.
- 8.1.2) Vehicles with differential case geometry changes that involve modification or alteration of the propeller shaft must be equipped with a valid propeller shaft loop in accordance with D1 Vehicle Regulations 5 Power Train 5.4. The shaft shall have a loop structure that encircles the shaft 360° from the universal joints at both ends of the shaft, and the loop shall be the minimum diameter required. They also shall be securely attached to the main body floor by a steel flat band 6.35 mm thick × 51 mm wide or 1.6 mm thick × 22 mm diameter or larger steel pipe, welded or attached to the main body floor by M8 or larger bolts and nuts in at least four places. The propeller shaft loop shall be relocated or added to the area where there is a high possibility of breakage.
- **8.1.3** Vehicles that have undergone engine modification involving modification or alteration of the propeller shaft, transmission case geometry modification, or cutting and welding of the floor tunnel shall be obliged to install an effective propeller shaft loop in accordance with D1 Vehicle Regulations 5 Power Train 5.4.

8.2) Transmission and differential oil catch tanks

8.2.1) Oil catch tanks must be fitted.

- 8.2.2) Oil catch tanks must have a reliable function to prevent oil from spilling onto the track and into the car body. The catch tank must not be temporarily attached with wire, tape, etc., but must be secured with a hose nipple, hose band, etc., to prevent disconnection.
- **8.2.3)** The transmission oil catch tank must be a metal or plastic tank with a capacity of 200 liters or more and must be mounted outside the vehicle.
- 8.2.4) The differential oil catch tank must be a metal or plastic tank with a capacity of 100 liters or more, and must be installed outside the vehicle.
- **8.2.5)** If transmission and differential oil catch tanks are shared, their total capacity must be 300 or more.
- **8.2.6)** Oil catch tanks must have an outlet and must always lead to the outside of the cabin and outside of the vehicle body.
- **8.2.7)** Breather piping and hoses must be secured alone, without being co-tightened with other piping and wiring.

9. brake system

- **9.1)** Modifications to the brake system are permitted, but it must be a two-system safety circuit and constructed to brake all four wheels simultaneously.
- **9.2)** Manual brakes must operate only on the rear wheels, must be completely separate from the main brake actuation system, and must operate simultaneously on both sides.
- 9.3) The use of carbon fiber rotors is not permitted, unless they are adopted by the officially adopted.
- 9.4) Oil reservoir caps for brakes and clutches must be secured to prevent detachment and leakage.

10. suspension and steering

10.1) Suspension Mounting Points

- 10.1.1) No modifications may be made to the chassis to change the suspension attachment points. However, suspension members that are separate from the monocoque body may be modified.
- 10.1.2) When replacing or modifying suspension members and suspension systems, a written document describing the purpose of the modification and the modified specification members must be submitted to D1J0 before starting the modification work, and detailed photographs of the progress and manufacturing status during the work must be submitted to D1J0 during the work to be eligible for official inspection.
- **10.1.3)** When modifying a suspension member, the modification or modification must be made with consideration so that there is no reduction in strength.

10.2) Suspension

- **10.2.1)** Replacement of suspension arms with fully bolt-on, interchangeable suspension arms is permitted.
- 10.2.2) Suspension arms that are cut and welded in shortened or extended lengths must be fabricated by a responsible manufacturer, and color checks and other inspections must be performed periodically at the participant's risk.
- **10.2.3)** Parts that could separate the wheels from the vehicle if such parts break must be fabricated by a responsible manufacturer, and periodic inspections must be performed at the participant's risk.

10.3) Steering and knuckles

- 10.3.1) Modifications are free. However, since they are an important part of the driving equipment and drifting on a circuit is expected to have greater inputs than on public roads, parts with sufficient strength and structure (equivalent to or better than stock) must be used.
- 10.3.2) Regardless of whether they are stock, modified stock, or external parts, participants must always personally inspect their vehicles for cracks, deformations, and tightened or damaged mounting bolts, etc. (arm mounting bolts, etc.) before driving to ensure safety, and must not expect this to be done by the official vehicle inspection.
- 10.3.3) No modifications (including the addition of parts) shall be made that could cause the wheel to separate from the vehicle in the event of damage.

11. tires and wheels

- 11.1) Tires must be commercially available tires for use on public roads. Only the tire brands listed in the latest edition of the "D1GP Series Tire List", which will be published separately from the 2024 Series, may be used.
- **11.2)** The maximum nominal width of tires that may be used is 265.
- **11.3)** When the tire is viewed from above the car body in a straight line, the portion of the tire above the horizontal line at the top of the wheel must not be visible beyond the fender.



11.4) Tire pressure shall be 1.2 kg/cm² or more.

11.5) Wheels

- **11.5.1)** When aluminum wheels are used, it is strongly recommended that they conform to JWL standards and bear the JWL/VIA mark.
- **11.5.2)** Wheel size must be within the allowable size specified by the tire manufacturer of the tires used.

11.6) Wheel spacers

- **11.6.1**) Stacking wheel spacers or using inadequately accurate wheel spacers is not permitted.
- **11.6.2**) Wheel bolts must be specially designed and manufactured by a reputable manufacturer.
- **11.6.3)** When spacers with a thickness exceeding 10 mm are used, they shall be bolt-fixed and the maximum thickness shall be 40 mm.
 - The fixing bolts for spacers shall be equivalent to those in 2) and torque check shall not be neglected.
- 11.6.4) Hub bolts must be properly managed to prevent damage under any circumstances. If a wheel comes off during an official race, the right to drive in the following races will be forfeited.

12. car body

12.1) Doors

- **12.1.1)** The driver and passenger doors must be unmodified production car doors.
- 12.1.2) Door linings are permitted to be replaced with other non-combustible materials.
- **12.1.3)** The rear doors of 4-door vehicles may only have their linings inside removed.
- 12.1.4) Door sealing must function to block the passage of air from the tire house.

12.2) Body modifications (including body excision)

- 12.2.1) Partial excision of other basic monocoque including the main frame is not allowed. However, minor modifications involving the minimum necessary shape change to prevent interference with modified parts are permitted to the extent that there is no reduction in strength.
- **12.2.2)** The overall width of a participating vehicle shall be limited to 150 mm above the original (stock) vehicle width for modifications such as the installation of over fenders.
- **12.2.3)** Over fenders shall not be of a temporary nature, shall be firmly fixed, and shall not have gaps between them and the vehicle body.
- **12.2.4)** The tops of tires shall be covered by fenders, not by the addition of simple moldings, panels, etc.
- **12.2.5)** The flange portion of the fender arch may be bent inward to avoid contact with the tire. However, in the case of synthetic resin, minimal cutting of that portion is permitted.
- **12.2.6)** If the rear wheel arch section is cut away to accommodate an overfender, the wheel housing and rear quarter panel must be welded together.
- 12.2.7) Roof panels may be converted to composite material, but the channel structure panels at the edge of the roof panel must be retained. If the roof panel is changed to composite material, it must be reinforced in accordance with the FIA International Motor Sport Regulations, Appendix J, Article 253, Safety Equipment, Section 8, Safety Gauge 8.3.2.1.3) Roof Reinforcement.
- 12.2.8) Vehicles equipped with sunroofs must not have an opening/closing mechanism and must be securely fastened to the roof panel. If the sunroof is made of glass, it must be made of a safe material other than glass and securely fastened.

12.3) Hood and trunk lid

- 12.3.1) The hood and trunk lid may be modified within the scope specified in 11.5) "Hood" of the D1 Vehicle Regulations.
- 12.3.2) The hood and trunk lid rear hatch must be able to be opened and closed from the outside

and must be securely fastened in at least 4 places including the factory installed hinges. They must not have a factory-equipped striker function.

- **12.3.3)** Additional fasteners must be of the pin-insertion type. (One-touch push type fasteners are not permitted.)
- 12.3.4) The hood opening/closing damper must be removed. 12.3.5) No changes or modifications to the material of openings with glass (rear (rear) hatches, etc.) are permitted. (except for minor modifications such as the installation of aero parts).
- 12.3.5) The trunk lid, rear hatch, rear engine hood opening/closing damper and auxiliary opening/ closing spring function must be removed, but may be installed on certain vehicles for safety reasons.

12.4) Glass

- 12.4.1) Front windscreens must be laminated glass with a certification mark approved for use on public roads. Cracked or broken glass is not allowed. If cracks or breaks are found during qualifying or competition driving, the judgment and instructions of the technical committee members must be followed on a case-by-case basis.
- **12.4.2)** Decals other than official control stickers are not permitted on the front and side glass, except from the driver's seat to the rear.
- **12.4.3)** Attaching smoke film (including colors other than black and mirror color) to window glass is prohibited. Attaching transparent film to prevent shattering is recommended.
- **12.4.4)** Side and rear windows must be made of safe and strong materials. In addition, the driver's and front passenger's side windows must be made of a material that ensures visibility.
- 12.4.5) Door windows must be rigidly fixed to the door structure or held in place with the same functionality as the original door structure to provide occupant protection against forces from inside and outside the vehicle. Auxiliary hardware that secures the upper portion of the door window panel to the vehicle body for this function is permitted. The hardware must not be simplified.
- **12.4.6)** If the rear windscreen is replaced with glass other than that of the base car, metal stays (at least two from the top to the bottom of the window) must be attached to the body shell or rear hatch in a strong, not simple, manner to prevent it from falling out.
- **12.4.7)** If the rear hatch is replaced with a non-standard lightweight material, standard windshields shall not be used.

12.5) Bumpers, etc.

- 12.5.1) Exterior body parts (front bumper spoiler, side steps, rear bumper spoiler) must be securely attached and must not be so attached that they can be easily detached by light contact. Bumpers must be securely fastened in at least 4 places (at both ends and in the center) by a method other than one-touch fasteners.
- **12.5.2)** Front and rear bumpers must be installed when entering the course for official events (qualifying, single race, and pursuit).
- **12.5.3** Side steps and diffusers must not be on the outermost side (width of the car) of the car. **12.5.4** Air jacks are not permitted.

12.6) Wings and other aerodynamic parts

- 12.6.1) With the exception of the stock wing, the wing must be contained within the surfaces (not including add-ons) that make up the maximum width of the vehicle body. In addition, no part of the wing may exceed the overall length of the vehicle.
- **12.6.2**] The wing shall be attached to the trunk and rear hatch. [Attachment to floor panels or rear panels is prohibited.]
- 12.6.3] All parts of the rear wing, canard, and front spoiler must be chamfered and rounded on the component parts except the wing end plates and the mounting surface of the main wing section.

In addition, the wing end plates of the rear wing shall be attached with tether wires or other means to prevent shattering. **12.6.4)** Front spoilers and splitters are permitted within the scope of D1 Vehicle Regulations 11.4.2).

13. car compartment

- 13.1) A car compartment is a space separated by a fixed front bulkhead and rear bulkhead.
- 13.2] In the case of two-box and hatchback vehicles, etc., where the rear bulkhead is continuous with the floor surface in a structure that does not form a clear wall shape, the assumed rear bulkhead is the surface immediately behind the back of the last seatback at an angle equivalent to that surface, and it is separated from the space by the front bulkhead. However, the conditions in the following paragraphs must be met.
- 13.3) The car compartment must be completely isolated by bulkheads from the engine compartment, gasoline tank, fuel collector tank, fuel pump and piping, oil tank, gearbox, propeller shaft, and piping joints, including when undercoating is cut away, bulkhead, floor, center Holes leading to the exterior of the vehicle, such as those at the tunnel, shift lever, etc., must be completely sealed with metal material or rubber boots. In addition, holes with a diameter of 20 mm or more in the cabin shall not be plugged with aluminum tape or other simple materials.
- 13.4) Bulkheads of car compartments shall be made of solid, fire-resistant material. If new bulkheads are provided, they must be completely isolated from the vehicle compartment and must be welded or bolted at short intervals and sealed with a sealant or other means, rather than blind riveted or otherwise temporarily attached.
- 13.5) All potentially hazardous objects (e.g., batteries other than dry batteries, flammable items except for batteries permitted to be installed in the cabin) must be mounted outside the cabin. Accessories that are permitted to be installed in the interior of the vehicle are: control devices, safety devices, communication devices, ballast (if permitted), windshield washer fluid containers, and various equipment for cool suits.
- **13.6)** The structure must allow a normally seated driver to escape from the cabin in an emergency within 7 seconds from the driver's side door and within 9 seconds from the passenger side door.

14. interior

- **14.1)** Two seats must be provided in the front, complete with dashboard and driver and passenger door inner trims. Changes to composite or other flame-retardant material products are permitted.
- **14.2)** Competition vehicles shall not be equipped with any interior trim other than that specified in 14.1), and the factory floor carpet must be removed.

15. seats

- **15.1)** FIA-approved seats are recommended for the driver's seat.
- **15.2)** Changing the mounting position or replacing the seat rail for the purpose of improving the driving position is permitted, but the seat rail must be a genuine part of the base car or a part that is set together with the seat. In addition, if the seat riser of the base vehicle is not used, the installation method must be in accordance with the JAF Domestic Competition Vehicle Regulations, Chapter 4, Article 13, 4).

15.3) The same shall apply when changing the front passenger seat.

16. safety belts

16.1) Safety belts must be of the full harness type compatible with the FHR system and of 6-point type or more, and must comply with the "Guidelines for Safety Belts in Rally and Speed Event Competitions" in the Supplementary Rules of Part 4 of the JAF Domestic Regulations for Racing

Vehicles. The belts must not be stretched, scratched, or deformed.

- 16.2) Safety belts that have passed the expiration date on the approved tag may not be used.
- **16.3)** It is not permitted to fasten safety belts to the seat or its support (seat rail). They must be fastened to the body using the seat belt anchors of the base vehicle or the method described in FIA-J.
- 16.4) Seat belt anchor positions must be located within the range shown in (Figure 1).



- 16.5) Auxiliary washers must be used for any new installation without using the body structure or the manufacturer's mounting points. The auxiliary washer shall be made of steel with a radius of 60 mm or more per side and a thickness of 3 mm or more, and the corners of the washer shall be rounded to a radius of 6 mm or more, or chamfered to a 45° angle of 6 mm or more.
- **16.6**) Depending on the direction of belt tension on the belt anchor, it is recommended to use shear bolts and eyebolts as shown in Figure 2.



16.7) Instead of belt anchor fastening, shoulder belts may be attached to the transverse bar welded to the backstays on either side of the roll cage. In this case, the mounting method must conform to that specified in the FIA International Motor Sport Regulations, Appendix J, Article 253.

17. protection of piping

- **17.1)** Fuel, oil, and brake piping must be protected against external damage (heat, flying rocks, corrosion, mechanical damage, etc.).
- **17.2**) The interior of the vehicle must be constructed so as not to cause fire under any circumstances.
- **17.3)** Fuel and lubricating oil lines (except brake and clutch systems) must not be routed through joints when they pass through the cabin.
- **17.4)** Fuel, oil, brake, and clutch piping and hoses, wiring, etc. must be secured individually, not cotightened with each other.

18. roll cage

The roll cage must meet the following conditions: D1 Vehicle Regulation 12-1 "Safety Cage" is recommended, and additional reinforcement members to bring it closer to this condition are permitted.

- 18.1) The configuration shall be a 6-point roll cage or larger, and for the main roll bar, it shall be φ40 mm or larger (wall thickness of 2 mm or more) and may be a bolt-assembled structure that can be detached and attached. (JAF Speed Event Vehicles: Must conform to Part 3, Chapter 5, Article 1 "Safety Regulations" of the Japanese Rules for Speed Event Vehicles.)
- **18.2)** Only cold-drawn seamless pure carbon steel tubing (D.O.M. copper tubing is permitted) is permitted for the roll cage and side bars. No alminium material is allowed
- **18.3)** At least two sidebars must be installed on each of the driver's and passenger's sides, and sidebar joints may be bolted sidebars that are removable via brackets, but the brackets that attach to the legs of each side roll bar and main roll bar must be welded to the roll bar.
- 18.4) The method of mounting the roll cage to the vehicle body shall be in accordance with the JAF Speed Event Vehicle National Competition Vehicle Rules, Part 3, Chapter 5, Article 1 "Safety Regulations" or D1 Vehicle Rule 12.1).
- **18.5)** The mounting position (height) of the side bar should be at least 200 mm above the seat surface when the driver is in the driving position.
- 18.6) Where the passenger's helmet may come in contact with the safety roll cage, a cushioning pad conforming to FIA Standard 8857-2001 Type A (see Technical List No. 23 "FIA-approved roll cage covering") or SFI 45.1 must be installed.

19. fire suppression system

All vehicles must be equipped with an in-use and lifetime manual fire extinguisher or piped fire extinguishing system (recommended).

19.1) Manual fire extinguishers

A manual fire extinguisher is a fire extinguisher whose body can be removed by the driver himself. Manual fire extinguishers must have a content of 2 kg or more.

19.2) Installation condition

19.2.1) Each fire extinguisher must be mounted so that it is fixed at close right angles (rivets and tie wraps are prohibited) to the front and rear of the vehicle and can withstand a force of 25 times the weight of the extinguisher in any direction, and only rapid-release metal (one-touch fittings) with metal straps Only rapid release metals (one-touch fittings) with metal

19.2.3) Fire extinguishers must be mounted in a position that allows the driver easy access from a seated position.

19.3) Fire extinguisher inspection

- **19.3.1)** Fire extinguishers must have a fire extinguishing function and the type, other capacity, and total weight of the extinguisher must be clearly marked on the container.
- **19.3.2)** Fire extinguishers with a damaged case (outside) or expired extinguishers are not allowed to be installed.

20. electrical system

20.1) Cutoff switch (main power supply)

- **20.1.1)** A cutoff switch (main power circuit switching device) must be additionally installed, and the control device must be mounted at a designated location inside and outside the vehicle where the driver can operate it while seated and wearing a belt.
- **20.1.2)** The mounting location of the outdoor control device shall be within a radius of 300 mm from the lower corner of the windshield support frame (see Figure 3).
- **20.1.3)** A spark sheet (lightning bolt mark) of at least 100 mm per side must be attached at the mounting location of the outdoor control device so that its location can be confirmed, and its operating method (PUSH or PULL, etc.) must be clearly indicated.
- **20.1.4)** The activation switches of outdoor control devices and fire extinguishers shall be installed in close proximity to each other in a position where each can be easily operated separately.

20.2) Battery installation

- **20.2.1)** The battery terminals and the positive terminal of the fuel pump and cell motor shall be insulated with nonconductive materials. The terminals shall be adequately insulated to ensure sufficient insulation in the event that they come in contact with other parts of the system due to accidents or other reasons. Various types of wiring shall not be fixed together with piping, etc.
- 20.2.2) Batteries with volatile batteries installed in the cabin must be dry batteries.
- 20.2.3) Battery mounting must be able to withstand a force of 25 times the battery weight in all directions. Bolt-only fastening of floor panels without adequate reinforcement is not permitted.

20.3) Lamps

- 20.3.1) All lights (front, tail, brake, direction indicator, etc.) and wipers must be in working order.
- 20.3.2) All lights are assumed to be in working order at the time of competition vehicle inspection. If any abnormality is found in the lights due to damage to bumpers, etc. during practice runs or competition, the technical committee members will decide whether to accept or reject the car.
- **20.3.3)** Strobe-type or other lights are not permitted during competition.

21. towing hooks

All vehicles must be equipped with towing hooks at the front and rear. The hooks must meet the following requirements

21.1) Conditions when the material is steel

21.1.1) A round bar with a minimum inside diameter of 50 mm (ϕ 50 when mounted on the vehicle and 50 mm in length) must pass through.

- $\ensuremath{\textbf{21.1.2}}\xspace$ The corners of the inside diameter must be smooth with R.
- **21.1.3)** It must be painted yellow, orange, or red.
- **21.1.4)** The maximum projecting width must be within 100 mm from the bumper hood.
- 21.1.5) The length of the hook when installed on the vehicle shall not exceed the total length. However, those that can be detached or retracted while driving on public roads are



permitted even if they protrude beyond the bumper.

21.2) Conditions when the material is fabric (Figures 4 and 5)

21.2.1) A round bar with a minimum inside diameter of 50 mm (ϕ 50 when mounted on a vehicle and 50 mm in length) must pass through.

- **21.2.2)** Only towing-specific brackets fabricated for towing are allowed.
- 21.2.3) Only red, yellow, and blue fabric belts are permitted.

21.3) Obligation of wearing strength

21.3.1) Under no circumstances shall the hook itself be allowed to come loose from the vehicle when towing. If the hook falls off when towing, the driver will be subject to a penalty.

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21.4) Obligation to clearly indicate the attachment point (Figure 6)

21.4.1) Both steel and fabric hooks must be clearly marked with an arrow sticker or other means to indicate where the hook is to be attached.

21.4.2) The color of the arrow shall be red. However, if the body color is red, the arrow shall have a yellow border (10 mm wide).

22. auxiliary devices, etc.

22.1) Driving Auxiliary Devices

The following driving aids are prohibited unless expressly permitted by the regulations. ABS / ASR / Traction Control / ESP....

22.2) Driver Radio

Driver communication devices may be installed only for voice communication methods, but must remain legally compliant for the venue of the competition.

英語訳お願いします

