D1 Vehicle Regulations

These rules apply to the vehicle 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 vehicle regulations for the D1 top category are defined as follows. In addition, vehicle regulations for vehicles participating in competitions, including vehicles with vehicle registration numbers, may be established in consideration of the vehicle laws of the country concerned. 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. Definitions

1.1) Vehicle Qualifications

A vehicle that is manufactured by a vehicle manufacturer and marketed to the general public as a road car, based on a passenger car with doors on both sides of the body.

The vehicle must be a passenger car with a seating capacity of at least 2 and no more than 6 passengers, and converted to a competition vehicle in accordance with these D1 Vehicle Regulations. However, vehicles that do not fit the purpose of the event will not be allowed to participate.

1.2) Definition of Terms

Definitions of terms used in these Regulations, other than those in the D1 Vehicle Regulations, shall be in accordance with the FIA Supplementary Provision J251. The term "general market" as used in these Regulations refers to products that are sold through normal sales channels and can be purchased by anyone, and must be verifiable through sales catalogs or other means.

Participants must be able to present a sales catalog or other evidence to prove this.

1.3) Permitted or Required Modifications and Additions

Regardless of whether or not a car is officially recognized or registered with the FIA or ASN, Articles 252, 253, and 269 of the FIA Supplementary Regulations J shall apply. However, the provisions presented in these Regulations shall take precedence over such provisions, and all modifications not specifically permitted by these Regulations shall be prohibited. Any modification that is permitted shall not be accompanied by any modification that is not permitted.

1.4) General Regulations

Competition vehicles must meet the following requirements of the following FIA Supplementary Regulations. Section J. 252 "General Regulations".

However, if similar meanings of the following items are defined in these D1 Vehicle Regulations, the text of these D1 Vehicle Regulations shall be followed.

- 252.1) General considerations (except 252.1.2)
- 252.2) Dimensions and weight
- 252.3) Engine
- 252.4) Transmission
- 252.5) Suspension
- 252.6) Wheels
- 252.7) Bodywork/chassis/body shell (except 252.7.7)
- 252.8) Electrical system
- 252.9) Fuel
- 252.10) Brake equipment

1.5) Safety Equipment

Competition vehicles must meet the following circuit competition vehicle requirements of the FIA Supplementary Regulations, Section J, Article 253 "Safety Regulations" below, or Section J, Article 269 "Special Regulations for DC1 Drift Vehicles".

However, if similar meanings of the following items are defined in these D1 Vehicle Regulations, the text of these D1 Vehicle Regulations shall be followed.

- 253.1) Dangerous vehicles
- 253.2) Optional safety devices
- 253.3) Piping and pumps
- 253.4) Braking and Steering Gear Safety
- 253.5) Additional fasteners
- 253.6) Safety belts 269.10) Safety cages
- 253.7) Fire extinguishers fire suppression systems
- 253.9) Rearward vision
- 253.10) Brackets with holes for towing
- 253.11) Window/net
- 253.12) Windscreen Safety Fastening Device
- 253.13) Circuit breakers (cut-off switches)
- 253.14) FIA-approved safety fuel tanks
- 253.15) Fire protection
- 253.16) Seat anchorage points and supports
- 253.17) Pressure control valves
- 253.18) Special requirements for electrically driven vehicles

2. Vehicle Inspection

The Chairman of the Technical Committee shall make the final decision on the conformity of the vehicle with respect to the following items under these Rules and Regulations, and the participants must abide by such decision. The technical committee chairman may propose to the competition jury that the participant be allowed to participate in the competition on the condition that the vehicle is not compliant with the following items, but that it is improved by the specified time (including a few hours after the specified time). In this case, such period cannot be extended if the improvement is not completed by the specified time

2.1) Confirmation of Vehicle Qualifications

It is the participant's obligation to verify the qualification of the base vehicle of the competition vehicle to prove that the vehicle in question is a regular production vehicle.

2.2) Compatibility of Modifications

Participants must participate in the competition on the premise that the modifications made to the competition vehicle conform to the regulations in accordance with these rules, and must correctly declare such modifications prior to vehicle inspection. If any further modifications are made to the vehicle after the vehicle inspection, the details must be reported to the Technical Committee Chairman.

2.3) Confirmation of Safety Equipment

Participants must correctly declare before the vehicle inspection that all safety equipment specified in these rules is in compliance.

2.4) Checking Vehicle Condition

- 2.4.1) As a professional competitor, each Participant is responsible for the workmanship, completion of maintenance, and clean-up of his/her vehicle, and the vehicle must be in satisfactory condition at the time of vehicle inspection.
- **2.4.2)** The vehicle must display the numbers and other markings specified in the series rules as specified in the regulations at the time of vehicle inspection.

2024 D1 Vehicle Regulations 33

- 2.4.3) If a car temporarily fails to conform to these rules due to damage sustained during competition, the car must be repaired by the team concerned to conform to these rules, and the Technical Committee Chairman will decide whether the car can participate in the competition.
- (2.4.4) The technical committee chairman will make a decision on the safety of the car from the viewpoint of driver safety, safety of other competitors, and safety of officials and spectators, and participants may not dispute the dangerous decision of the technical committee chairman.

3. Competition Vehicle Dimensions and Weight

- 3.1) The weight of the competition car shall be 1000 kg or more including the weight of the driver and driver's equipment, and there shall be no class or engine displacement classifications based on weight. The competition car weight is the weight of the car, including the driver, during the entire competition period. The weight cannot exceed the maximum weight of the standard vehicle type.
- 3.2) It is permitted to increase the weight of a car by one or several fixed ballasts with a total weight not exceeding 25 kg. However, the ballast must be a single structure of sufficient strength, capable of being sealed, installed with tools, located in the cockpit or on the floor of the trunk compartment, and easily visible and sealed by the vehicle inspector. Any reinforcement or safety structure components shall not be considered ballast, but shall be integrally connected to the body of the car. Ballast must not be removed or added during the competition period under any circumstances once it has been sealed.
- 3.3) The maximum dimensions of a car in competition shall be 5000mm in length, 2000mm in width, and 1500mm in height, and any car exceeding these dimensions must apply to and be approved by D1JO. If the base car is over 1800mm, the overall width of the car shall be limited to 110%, and if it is under 1800mm, the overall width of the car shall be limited to 115%.

4. Engine

The engine body (cylinder block and cylinder head) must be constructed of automotive parts. There shall be no restrictions on displacement or other characteristics, nor shall there be classifications based on displacement, fuel consumption, or electric power drive.

4.1) Fuel

Fuel for internal combustion engines shall be limited to fuels for general commercial vehicles, and shall be gasoline, diesel, or ethanol blended gasoline, and no oxidizing substances other than air may be mixed. The use of leaded gasoline is not permitted. When ethanol-blended gasoline is used, it must be strongly recognized that rubber, aluminum, plastics, used for fuel tanks, fuel lines, etc., are ethanol corrosive, and effective preparations must be made with regard to fire.

4.2) Engine Replacement and Engine Mounting Position

The engine of another vehicle, including other manufacturers, is allowed to be mounted. The engine must be mounted in the engine compartment of the base vehicle, including the flywheel.

4.3) Engine Addition Equipment

Any additional engine equipment, including the addition of a supercharger, is permitted, but the installation of any oxidizer injection device other than air, such as a nitrous oxide gas injection system (NOS), or any other device intended for injection outside the intake air is prohibited.

4.4) Electric Motor Drive

Conversion to or addition of an electric motor for drive is permitted, but must conform to the safety regulations specified in FIA-J Section 253-18] "Special Requirements for Electric Drive Vehicles".

4.5) Fuel System

4.5.1) The fuel tank must be an FIA or ASN approved safety fuel tank or SFI Spec. 28.2 or better. 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. The fuel tank must be housed in a container (aluminum alloy 1.5 mm thick or more) of a shape that closely fits the cell.

- 4.5.2) The fuel tank must be located in the center of the car body above the complete wheel and must be protected by a monocoque body or guard pipe if it extends beyond the center of the car body, even partially. The fuel tank must not be located less than 300 mm from the bumper or body perimeter. If any part of the fuel tank is below the side frames, the lower part must be protected by a guard pipe or other means fixed to the frame structure. (Complete wheel means wheel and tire set)
- 4.5.3) The fuel tank, collector tank and fuel pump must be completely isolated from the cockpit by a firewall made of steel plate (minimum 0.9 mm thick) or aluminum alloy plate (minimum 1.5 mm thick) or honeycomb composite material at least 10 mm thick. The firewall must be completely fixed to the body shell and separated from the cockpit by sealing.
- **4.5.4)** Fuel tank ventilation must be designed to prevent fuel spillage even when the vehicle is tipped over, in accordance with the provisions of FIA Supplementary Provision J 253-3.4).
- **4.5.5)** At least two backflow prevention valves must be installed in the fuel tank.
- **4.5.6)** It is recommended that fuel supply ports be located outside the vehicle body.

4.6) Lubrication and Cooling Systems

- **4.6.1)** Any sump system is acceptable. Oil coolers must be installed in such a way as to prevent oil leakage from piping, etc. in the event of an accident. It must also be equipped with a reliable device to prevent oil from spilling onto the track.
- **4.6.2)** Coolant catch tanks must have a minimum capacity of 1L. Engine oil catch tanks must have a capacity of 2L for vehicles with cylinder capacity up to 2000 liters and 3 L for vehicles with cylinder capacity greater than 2000 liters. This container must be made of metal and have a partially transparent window.
- 4.6.3] Relocation of the cooling system to the rear trunk or elsewhere is permitted, but introduction of cooling air from the cockpit is prohibited. If the cooling water piping passes through the cockpit, it must be completely isolated by steel plates (0.9 mm or thicker) or aluminum alloy plates (1.5 mm or thicker), and the bottom must be constructed to drain leaked cooling water outside the compartment.
- 4.6.4) 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, however, simplified ones are not acceptable and must be firmly fixed.
- **4.6.5)** Heat exchangers for various cooling purposes must be mounted as far away from the outermost surface of the car body as possible, and must be constructed to prevent leakage of cooling liquid, oil, etc.

5. Power Train

- **5.1)** Both transmission and final drive may be modified or replaced freely, but must have a backward traveling function.
- 5.2) Incorporation of an electric motor as auxiliary power is acceptable, but must comply with FIA-J Paragraph 253-18).
- **5.3)** Transmissions must be provided with an oil catch tank of minimum 200 ml and differentials must be provided with an oil catch tank of minimum 100 ml.
- 5.4) A valid propeller shaft loop shall be mandatory. The loop shall be of the minimum required diameter and shall be made of a steel flat band 6.35 mm thick × 51 mm wide or larger, or a steel pipe 1.6 mm thick × 22 mm or larger in diameter, and shall be welded to the main body floor or installed with M8 or larger bolts and nuts at 4 or more locations. In addition, the propeller shaft loop shall be

34 2024 D1 Vehicle Regulations 35

relocated to a location where there is a high possibility of breakage, and shall be added securely.

5.5) 4-wheel drive system vehicles may be classified according to the competition rules.

6. Suspension

6.1) Free to change the form and mounting position.

6.2) Wheel Uprights (knuckles)

- 6.2.1) Wheel uprights may be used for general production vehicles, including mass production vehicle manufacturers and other manifestations. However, they must be mass-produced vehicle weight components of heavier weight than the competition vehicle concerned. Modifications are limited to the steering knuckle area only, and any modifications that require modifications must be applied for in advance.
- **6.2.2)** Wheel uprights that have been specially developed or modified other than the steering knuckle portion must be officially certified as having a level of strength and quality control that allows for the sale of such parts.
- 6.2.3) Wheel tether wires are recommended.

7. Tires and Wheels

7.1) Tires

- 7.1.1) Tires used must be molded and no additional grooving is permitted. The Sea Rand ratio (groove area divided by tread area) of the tread pattern must be at least 22% in the unused condition. However, negative patterns with a depth of less than 1.6 mm at the deepest point in the unused condition shall be treated as land areas. Participants must submit tread pattern drawings or stone-printed drawings of the tires to be used if the manufacturer has not provided the organizer with the data. In addition, the tires must conform to Stage 2 of UN/ECE Regulation No. 117 02 (henceforth R11702). If the tire is not certified under S2WR2, test data showing that it is equivalent to S2WR2 must be submitted. However, in 2023, only the Rolling Resistance Coefficient (R117-02) Stage 2 (10.5 N/kN or less) can be used by submitting test data showing that it is equivalent to R117-02.
- 7.1.2) The maximum tire size that can be used must be within the range shown in the table on the right (Figure 7-1) when the vehicle is roadworthy. The weight classifications are subject to change during the course of the season.

(Figure 7-1)

Competition vehicle weight classification (Kg)	< 1275	1275 ≦
(Maximum nominal width size)	Under (265)	Under (285)
Maximum cross-sectional width (mm)	≤ 282	≤ 302
Maximum outer diameter (mm)	≤ 703	≤ 746

7.2) Wheels

- 7.2.1) Wheels must be based on general commercial wheels, and if aluminum wheels are used, they must conform to JWL standards and bear the JWL/VIA mark. In the case of overseas products, they must conform to the technical standards set by each country and be approved, and must be able to be presented immediately upon request for certification.
- 7.2.2) When wheel spacers are used, they must comply with FIA J, Article 269 of the supplementary rules. Only one wheel spacer per wheel is permitted. Spacers thicker than 20 mm shall be fitted with their own mounting bolts to the hub. The maximum allowable wall thickness of spacers is 60 mm per wheel.

7.2.3) Hub bolts must be properly maintained to prevent breakage under any circumstances. If a wheel comes off during an official race, the right to drive in the following races will be forfeited.

7.3) Complete Wheels (= wheels and tires as a set)

- 7.3.1) The cross-sectional width of a tire shall be measured on a complete wheel and used to determine the nominal width and outside diameter of the tire. The use of tires that exceed the values listed in the table in Section 7.1.2) when mounted on standard wheels at standard inflation pressures is prohibited. In addition, it is prohibited to install tires on wheels that exceed the applicable size indicated for sale by the tire manufacturer.
- 7.3.2) When a complete wheel is mounted on a vehicle and viewed from above the vehicle with the tire in a straight line, the portion of the tire above the horizontal line at the top of the wheel must not be visible. (See Figure 7-2)

(Figure 7-2)



8. Braking System

- **8.1)** The pedal system, master cylinder, pipes, calipers, and discs may be freely changed, but must be of two safety circuits and constructed to brake all four wheels simultaneously.
- **8.2)** The manual brake must be completely separate from the main brake actuation system, operating only on the rear wheel, and must operate simultaneously on both sides. The oil reservoir tanks of the side brake master cylinders must be of a construction that does not allow oil to flow out when it is reversed up and down.

9. Steering

- **9.1)** The steering system may be modified freely.
- **9.2)** The steering wheel and tie rods must be mechanically connected to the left and right road wheels in a fully mechanically coupled system.
- 9.3) Electronically controlled steering systems are prohibited, and power steering must be limited to the function of assisting the steer operation. In addition, steering must be steered only by the front wheels; systems in which the rear wheels are steered are not permitted.

10. Body Shell / Frame

10.1) Body shell (monocoque)

10.1.1) The bodyshell is, for example, all parts of (Figure 10-1) and is the structure of the main part of the car body structure formed integrally by welding.

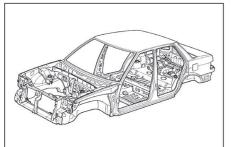
36 2024 D1 Vehicle Regulations 2024 D1 RULE BOOK 37

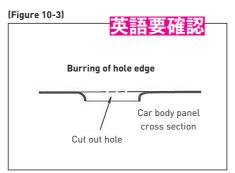
10.1.2) The body structure must be maintained. If fabricated, the original strength and function must be maintained.

10.1.3) The bodyshell (monocoque body) shall be the portion forward of 200 mm from the front axle. In addition, the portion behind the rear fender inner panel can be a pipe structure. (See Figure 10-2)

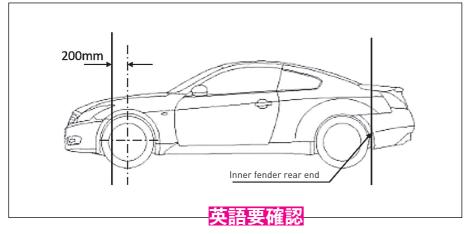
The portion of the rear quarter panel (outer panel) outside of this range, from the line connecting it to the back window substructure downwards, may be replaced with composite material in the same manner. The back window substructure must be retained together with the rear quarter pillars. The bodyshell may have panels and other parts cut out to reduce weight, but no measures such as burring of hole edges may be taken due to maintain sufficient strength and rigidity (See Figure 10-3).

(Figure 10-1)





(Figure 10-2)



10.1.4) Even after the bodywork is cut or otherwise modified as permitted in this rule, the engine compartment, cockpit, wheelhouse, and trunk compartments must be separate spaces. However, the trunk section may be integrated with the cockpit if it meets the cockpit requirements.

10.2) Change of Dimensions

10.2.1) Changes to the wheelbase are permitted, but the wheel compartments cannot be changed from their original center position and must be accommodated only by expansion.

10.2.2) Aerodynamic components that may protrude from the base car's body outline length dimensions and body width dimensions are permitted to be changed only by over fenders. Height changes are permitted only with the use of complete wheels and suspension.

10.3) Roof

- **10.3.1)** The roof panel within the body shell may be changed to composite or light alloy, but the material of the other parts may not be changed.
- 10.3.2) Ventilation ducts may be provided on the roof for car inside ventilation.
- 10.3.3) Convertibles are not permitted as competition vehicles and must be equipped with a hard top.

10.4) Modification of Frames

- **10.4.1)** Engine mounting methods may be modified to accommodate engine conversion or orientation changes, provided that sufficient strength is guaranteed.
- **10.4.2)** Suspension members may be modified and mounted as a result of suspension changes, but must be adequately guaranteed as to strength by the participant.
- **10.4.3)** Modification of the shape of the front side member to change the suspension or to secure steering angle is permitted, but the strength of the member must be adequately guaranteed by the participant.
- **10.4.4)** The side members may be cut within the scope specified in 10.1.3) for the purpose of creating a pipe structure at the front and rear of the vehicle, but the cut must be a closed section. This section and the bumper bar must be connected by a pipe structure.
- 10.4.5) The bumper bar or alternative functional structure must be retained and, if pipe structured, must be held in place by a steel pipe 25 to 40 mm in diameter or per side and 1.6 to 3.2 mm thick, at least over the side frame and in close proximity to the inside of the bumper cover. In addition, the structure shall be capable of withstanding any impact and shall not fall off.

10.5) Front Bulkhead and Center Tunnel

(Figure 10-4)

10.5.1) Modifications to the front bulkhead and tunnel area due to engine and transmission modifications are allowed within the following dimensional range, but must be supplemented by reinforcement and addition of the lower crossmember structure, addition of connecting pipes on either side of the front roll bar, and other strength-enhancing measures. The bulkhead position of the base vehicle must be maintained and shall be symmetrical to the bulkhead face and the underside of the floor, with a maximum range of 460 mm wide x 390 mm high and 450 mm deep, 460 x 300 x 800, and 370 x 300 x enclosing three rectangles to the required depth. (See Figure 10-4)

Up to the required length

370mm

390mm

390mm

Bottom of floor

Bulkhead surface

38 2024 D1 Vehicle Regulations 39

10.5.2) Partial modification of the front bulkhead and side sills to ensure tire cutting angles is acceptable, but strength and function must be maintained.

11. Body Work

11.1) Appearance

- 11.1.1) Body panels exposed to airflow must be recognizable to the base vehicle.
- 11.1.2) If ventilation functions are provided on exterior body panels that are exposed to airflow, they must be louvered or mesh-treated.
- 11.1.3) Competition vehicles must maintain the exterior specifications as of the time of vehicle inspection, including official practice sessions.

11.2) Cockpit

- 11.2.1) Cockpits are subject to FIA-J Section 252-7-3), but must be strictly protected, especially
- 11.2.2) The dashboard must be the same as that of the base car or, if modified, must have antiglare features for the driver. It must have approximately similar dimensions and mounting
- 11.2.3) The cockpit must be well ventilated and free from tire smoke, exhaust, etc.
- 11.2.4) The structure must allow a normally seated driver to escape from the cabin in an emergency within 7 seconds from the driver side door and within 9 seconds from the passenger side door.

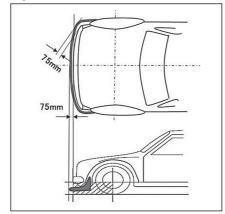
11.3) Pedal box & master cylinder installation

A pedal box may be installed on the cockpit floor and the pedals and master cylinder may be relocated, but the oil reservoir should be a separate type and outside the cockpit.

11.4) Aerodynamic devices

- 11.4.1) The height of the rear aerodynamic system must not exceed the highest point of the roof. The height of the rear aerodynamic device must not exceed the highest point of the roof panel, even if there is a ventilation system on the roof. No part of the stay must be behind the rear bumper.
- 11.4.2) A dimensional extension of up to 75 mm in a tangential and perpendicular direction (Figure 11-1) is permitted from the external shape composed of the bumper cover, etc. of the base vehicle at both front and rear. This area may be used for aerodynamic devices such as canards, splitters, diffusers, underwings, etc.
- 11.4.3) Canards on both front sides may be extended in a continuous manner to the front over fenders.
- 11.4.4) Aerodynamic parts must not be of wire suspension or rod-shaped support structure, and must be fixed with sufficient rigidity and strength. In addition, tether wires must be attached to the wing end plates of the rear wing. Bumpers must be attached at both ends and at least 4 places in the center by a method other than onetouch fasteners.
- 11.4.5) The edges of all aerodynamic parts must have a radius of at least 5 mm shape processing.

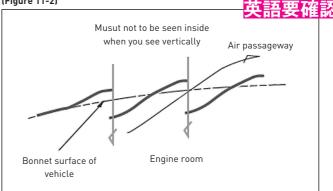
(Figure 11-1)



11.5) Hoods

- 11.5.1) The hood may be made of composite and may be provided with louvers for ventilation, but must not be of a construction that allows the interior to be seen when viewed from directly above. (See Figure 11-2.)
 - It is not necessary for the panels to wrap completely as shown in the figure if the masses are covered with 10 mm or less mesh or other material.
- 11.5.2) If an air scoop is to be installed on the hood, it is not allowed to protrude from the hood surface of the base vehicle, and only the NACA duct type is allowed.
- 11.5.3) Any modification of the hood shape to avoid interference of engine parts with the hood must be smoothly molded. Components must be covered by the hood without protruding convexly from the engine compartment to the outside of the car.
- 11.5.4) The hood must be secured in four places, including the factory hinges, and any additional fasteners must be of the pin-insertion type. (One-touch push type fasteners are not
- 11.5.5) The hood opening/closing damper and any factory installed striker feature must be removed.

(Figure 11-2)



11.6) Fenders

- 11.6.1) Fenders may be made of composite material and may be widened to cover the tires, but must be rigidly attached. They must be constructed of continuous surfaces and lines and must not be of simple construction.
- 11.6.2) The rear quarter panel is defined as the rear fender from the portion connecting to the back window substructure to the lower level of the side door glass, and may be removable or replaced with composite material. In this case, however, all roll cage connection and attachment structures must be welded specifications.
- 11.6.3) The unibody portion of the wheel house (mud guard) may be reshaped to avoid tire interference, but the structure must not be altered.
- 11.6.4) Vents may be provided at the rear of the fenders to exhaust air from the wheel house, but the tires must not be directly visible through the vents. If the tire is directly visible, it must be covered with a metal mesh with a mass of 10 mm or less.

11.7) Side Doors

11.7.1) The door material may be changed to composite or light metal provided that sufficient strength is maintained.

2024 D1 RULE BOOK 41 2024 D1 Vehicle Regulations

- 11.7.2) The front door (driver & assistant door) must maintain its shape and structure and must be able to hold the window section free-standing with sufficient strength and rigidity. In addition, sealing must be ensured and ventilation must be blocked between the window and the body below the window.
- 11.7.3) Non-metallic front doors must be fitted with inner panels made of 1 mm thick steel plate or 1.6 mm thick aluminum alloy or equivalent or better, or with door bar side protection in accordance with FIA-J Section 269-10).
- 11.7.4) For the front doors, external door handles and hinges & strikers shall be limited to base car parts. In addition, both side doors must be constructed so that the driver can easily open them from the inside.

11.8) Windshields and Windnets

- 11.8.1) Front windscreens must be OEM parts or made of polycarbonate with a minimum thickness of 5 mm, but must be safely installed. The materials used must be reliably certified by the manufacturer or distributor, and a certificate for the product must be presented.
- 11.8.2) It is not permitted to remove the side and rear windows, and polycarbonate panels (transparent and at least 3 mm thick) must be used. Window nets on the driver's side are also recommended, but those obstructing the driver's field of vision are prohibited. The equivalent portion of the door glass must be firmly supported by the door structure to provide occupant protection against forces from inside and outside the vehicle. Auxiliary tool that secures the upper portion of the door window panel to the vehicle body for this function is permitted.
- 11.8.3) Rear quarter screen sections and rear windscreens should be made of transparent material, but if they are changed to metal or composite material, they must have a glass-like appearance and color tone that is distinguishable from the rest of the body design.
- 11.8.4) Rear windscreens must be held in place by metal stays (at least two from the top to the bottom of the windscreen) bolted to the body shell or rear hatch to prevent them from falling out.
- 11.8.5) When converted to a rear radiator, air inlets may be provided in the rear quarter window and rear window within the following limits
 - An air scoop must be available with a height of 50 mm or less from the screen surface.
 - The shape of the screen on the interior side of the vehicle may be freely designed, but the shape of the surrounding mounting area must be maintained.
 - When installing in the rear window, a stay shall be provided as described in the previous section, and the shape of the screen from this stay to the side of the vehicle shall be maintained.

11.9) Rear Hatches and Trunk Lids

- 11.9.1) They may be converted to composite, but both the body and the method of attachment must be strong enough to guarantee strength when reversing at high speed if aerodynamic devices are added.
- 11.9.2) Fasteners must be secured in at least 4 places, including additional fasteners per FIA-J section 253-5 (JAF Chapter 4, Article 3).
- 11.9.3) No part of the rear hatch may be used as a firewall between the rear hatch and the cockpit.
- **11.9.4)** When vents are provided in the trunk lid, rear hatch, or rear window, the same appearance as in Section 11.5.1) "Hood" must be maintained.
- 11.9.5) The opening/closing damper and auxiliary opening/closing spring feature, as well as the factory-equipped striker feature, of the trunk lid, rear hatch, and rear engine hood must be removed.

11.10) Trunk Compartment

11.10.1) The cut surface of the exhaust pipe outlet must not be visible from within the trunk compartment. It must also be completely independent of the wheel compartments. If floor panels are modified, a cross member must be provided at the rear end of the rear

frame.

- **11.10.2)** If there is an internal fuel/oil tank or mechanical device, a fireproof fire barrier must be formed between the cockpit A similar fire wall is required if there is ventilation between the trunk and the road surface.
- 11.10.3) Radiators and other heat exchangers may be installed, in which case a fire-resistive firewall must be formed between the cockpit.

12. Driver Protection Devices

12.1) Safety cage

- 12.1.1) If an FIA/ASN approved roll cage is used, it must be marked with the manufacturer's identification and serial number, and the approved construction and installation method must be maintained.
- 12.1.2) Regardless of when the basic vehicle was produced or whether the vehicle is certified or not, the provisions of the International Motor Sport Regulations, Supplemental Rule J, Paragraph 269-10, shall apply to this rule. (See Figure 12-1)
 In addition, vehicles individually certified in FY2023 may continue to be used.

(Figure 12-1)

FIA-J項253-8.3.3)「パイプの仕様」及び、FIA-J項269-10.2)「安全ケージ-仕様」抜粋。

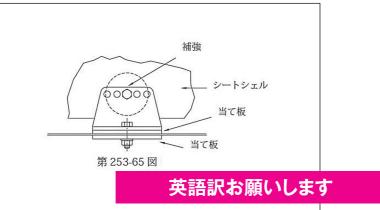
材 質	最小引張強度	最小寸法 (mm)	用途
冷間引抜 継ぎ目無し 純炭素鋼	2501/4	45×2.5 (1.75"×0.095") または 50×2.0 (2.0"×0.083")	メインロールバー(第253-1図および第253-3図)または、サイドロールバーおよび後部横方向の部材(第253-2図)
<下記参照> 最大0.3%の 炭素を含有	350N/mm² -	38×2.5 (1.5"×0.095") または 40×2.0 (1.6"×0.083")	ハーフ・サイドロールバーおよび安全ケージのその他の部分 (上述の項でその他の記載がない限り)
		(110 1101000)	
7	英語	尺お願いし	ます
7	英語		ます

12.2) Seats

- **12.2.1)** The driver's seat must be a seat that is within the approved time limit of the FIA-8855/1999 or 8862/2009 standards.
- 12.2.2) If seat position adjustment rails are used, they must be the original equipment of the standard car or the rails set with the FIA-approved seat. In addition, if the seat mounting method is changed, the provisions of FIA-J Section 253 and 16 shall be followed. (See Figure 12-2)
- 12.2.3) The passenger seat must be installed and the method of installation must be as safe as the driver's seat.

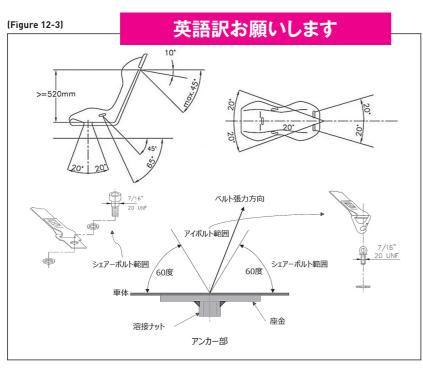
42 2024 D1 Vehicle Regulations 2024 D1 RULE BOOK 43

(Figure 12-2)



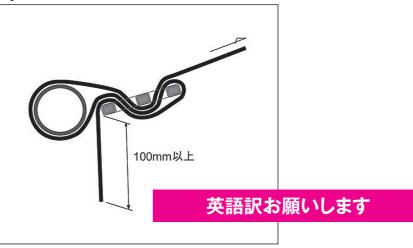
12.3) Safety belts

- 12.3.1) A six-point safety belt equipped with a turnbuckle release system must be installed with a belt conforming to FIA Standard 8853/98 or SFI Standards 16-1 and 16-5. In addition, FIA-approved belts may be used until the expiration date listed on each belt, and belts conforming to SFI standards may be used for two years from the year of manufacture, but may be used for up to five years if the certification is renewed.
- 12.3.2) The angle of each strap must be within the range shown in (Figure 12-3).



- 12.3.3) The passenger seat belt and attachment method must be as safe as that for the driver's seat.
- **12.3.4)** The three-point buckle used when the shoulder strap is secured by a loop system is recommended to be used as shown in (Figure 12-4).

(Figure 12-4)



12.4) Fire extinguishing devices

The fire extinguishing system must work in any vehicle position, even if the vehicle falls over. Fire extinguishers must be mounted at least 300 mm away from the outside of the vehicle body and must be able to withstand 25 Gs or more in all directions. In addition, vehicles using alcohol blended fuel of E30 or higher must be equipped with a fire extinguisher with an alcohol compatible extinguishing agent such as AR-AFFF. Depending on the fuel used, fire extinguishing equipment specified by the organizer may have to be installed.

12.4.1) Fire Extinguishers

All vehicles must be equipped with an automatic fire extinguishing system as specified in FIA-J Section 253-7.2] (JAF Chapter 4, 5.2) Automatic Fire Extinguishers). The fire extinguishing system must conform to FIA Technical List No. 16 or No. 52.

12.4.2) Activation devices

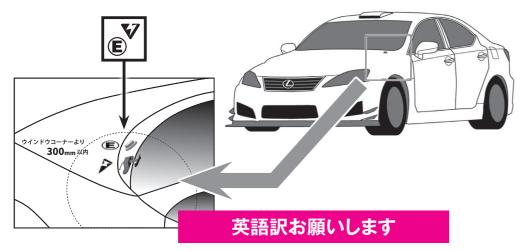
Starting devices inside the vehicle cabin must allow the driver, normally seated in the driver's seat and wearing a safety belt, to operate the starting device. External activation devices must also be operable by any person outside the vehicle at the same time. The sudden start prevention device must be deactivated whenever the vehicle is in motion. In the case of a ringing PIN type sudden start prevention device, a mark (such as a 50 mm x 300 mm red ribbon) must be attached to the device so that it can be easily pulled out and checked before driving.

(1) In the case of the FIA-approved fire extinguishing system described in (1) above, the two fire extinguishing systems (one in the engine compartment and the other in the cabin) must be activated simultaneously. In addition, the activation device from outside the car must not be linked to the circuit breaker and must be located in close proximity to the circuit breaker.

2024 D1 Vehicle Regulations 45

(2) Remote activation devices for engine compartment fire extinguishers other than the FIA-approved system described in the preceding paragraph (2) shall be the same as in (1) above. However, the system must be designed to continue spraying once the activation device is operated.

- (3) If the activation device is not only a mechanical type, it must be equipped with an energy source that is not the main energy source.
- (4) In close proximity to each activation device, a mark shall be displayed depicting the letter E in red within a white circle with a minimum diameter of 10 cm bordered in red.



13. Electrical Equipment

13.1) Circuit breakers

The circuit breaker (master switch) shall be mounted with the trigger near the bottom of the front windshield support frame and shall be marked with a spark symbol of at least 12 cm per side and operating instructions. The circuit breaker and fire extinguisher activation switches shall be installed in close proximity to each other in a position where each can be easily operated separately.

13.2) Lamps

The lighting design of the base car shall be generally maintained. (All exterior lights (except for the base car with retractable headlamps) must maintain their function except for auxiliary lights. In addition, glass and acrylic resin lenses must be covered with shatterproof transparent film.

13.3) Wipers

Wipers may be modified, but must be in good working order at all times.

13.4) Rear view device

In addition to the left and right rear view mirrors, it is recommended that rearward vision be provided by a room mirror or alternative device. In this case, an electronic monitor screen may be substituted.

13.5) Battery

The battery may be installed in any position as long as it is completely isolated from the fuel tank,

but if it is installed inside the cabin, it must be enclosed in a nonflammable case with the vent tube outside the vehicle. For sealed batteries, case storage and venting are not required. The battery must be secured in such a way that it can withstand a force of 25 times its weight in all directions. The anode terminal must be thick and strong enough to ensure complete insulation even if it comes in contact with the car body, etc., and not just with vinyl tape.

14. Exhaust System

- 14.1) Internal combustion engines must be equipped with a commercially available exhaust catalytic converter that has an effective exhaust purification function. Modification of the flange of a commercially available catalytic converter is permitted, but the catalytic converter must be of a structure that allows the internal structure to be checked by itself.
- 14.2) The exhaust pipe exit must be at least 10 cm above the ground level and no further back than the line connecting the rear ends of the two rear wheels. When a fuel tank is installed in the trunk compartment and the fuel supply port is inside the trunk, and the fuel tank, fuel supply port, and other fuel equipment are not completely sealed from the outside of the vehicle and the trunk is designed to allow exhaust air to enter the trunk, the rear ends of the fuel tank, fuel supply port, and other fuel equipment (including pipes) and the exhaust pipe outlet must be at least 50cm In any case, the fuel tank must not be constructed in such a way that fuel would be sprayed onto the muffler in the event of a fuel spillage.
 - In addition, any fuel tank structure must not have all of the exhaust pipe outlet visible from the rear of the vehicle, and must discharge downward from the vehicle.
- 14.3) If the waist gate exhaust is not merged with the exhaust pipe above, the waist gate exhaust shall be either a rearward-facing exhaust outlet behind the fuel tank or a sideways-facing exhaust outlet behind the centerline of the wheelbase and up to 10 cm inward from the sides of the vehicle body, or from a pipe that is less than 15 mm convex from the hood top surface. The exhaust must discharge vertically. The diameter of the hole in the hood at this time is permitted regardless of the provisions in 11.5) as long as the diameter of the exhaust pipe + 30 mm or so.
- 14.4) Exhaust volume must be less than 113db(A) as measured at the trackside under no circumstances (including temporary volume due to anti-lag). However, any changes due to competition conditions will be clearly stated in the special rules of the event. Competitors whose vehicles are measured to be louder than the specified value will be subject to a penalty.

15. Towing Devices

All vehicles participating in the competition must be equipped with towing devices at the front and rear, and their positions must be clearly indicated by arrows in a color that contrasts with that of the vehicle body. Due to the nature of the pursuit competition, the towing devices shall be of the webbing belt type or hinged type, and should be mounted lower than the wheel center.

16. Auxiliary Devices, etc.

16.1) Driving Auxiliary Devices

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

16.2) Driver radios

Driver communication devices may be installed only for voice communication methods, but must remain legally compliant with the competition venue. The device must be deactivated if its use is restricted by the competition organizer.

16.3) Telemetry equipment

Under no circumstances may any data transmission system other than the competition organizer's system be used, either from the vehicle or to the vehicle in both directions.

46 2024 D1 Vehicle Regulations 2024 D1 RULE BOOK 47