# Appendix 24 to Classification and Technical Requirements.

# TECHNICAL REQUIREMENTS TO DRIFT CARS.

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#### CHAPTER 1.

# General requirements to DC-1 and DC-2 class drift cars

# 1. Safety requirements

#### 1.1 Allowed vehicles

Drift cars prepared on the base of stock vehicles with sedan, hatchback, wagon body types are allowed to take part in the events. The vehicle must be supplied with a RAF Sports Technical Passport (STP) presented when passing entrance technical inspection. The vehicles failing to fulfill with these requirements can be allowed with a permission of the event organizer.

#### 1.2 Safety cage

The safety cage shall comply with the requirements of Appendix 14 to C&TR.

The safety cages manufactured before 01.01.2018 are allowed to have on diagonal cross brace on the back stays.

All the cars built after 01.01 2023 shall have a safety cage manufactured in compliance with the drifting safety cage requirements, and, particularly, the safety cage structure shall have a reinforced firewall on both sides of the vehicle.

Until the end of 2024, all vehicles participating in drifting competitions shall have a safety cage with additional firewall reinforcement on both sides of the vehicle.

Using the safety cages produced by foreign manufacturers in accordance with Formula D American Drift Championship with the manufacturer's certificate is allowed; decision for every vehicle with such a safety cage is made individually by the event organizer.

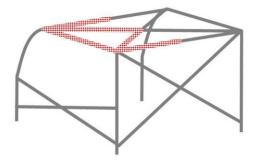


Figure 1

The spots where the driver's helmet might come into contact with the safety cage shall be lined with paddings complying with Type A in accordance with FIA 8857-2001 (See FIA Technical List No. 23) or SFI 45.1. The paddings are recommended to be installed on all the cage elements highlighted with red in Figure 1. The paddings shall be securely fixed to prevent slipping and spinning.

### 1.3 Seats and seat anchorage

The original driver's seat shall be replaced with an anatomic sports car seat homologated in accordance with FIA requirements (FIA Standard 8855-1999, 8862-2009 or 8855-2021) or RAF (Appendix 15 to C&TR). On DC-2 and DC-3 class cars, using stock sportstype seats without homologation is allowed. Such seat backs shall be solid, reaching the top of the driver's head in height.

The seat supports and their anchorage points shall comply with the provisions of Article 253-16 of Appendix J to the ISC FIA. For the seats complying with FIA Standard 8862-2009 and 8855-2021, the seat anchorages shall be homologated with the seat or with the vehicle.

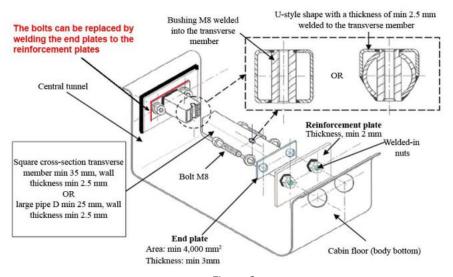


Figure 2

If the seats are attached to cross bars, these bars shall be attached in accordance with the requirements of Article 253-16.2 (Figure 2) or welded to the body. The pipes shall be welded around the entire perimeter to the reinforcing plates with an area of at least 40 cm<sup>2</sup> (each) and a thickness of at least 3 mm, in turn welded around the entire perimeter to the body. All welding seams shall be of high quality, they shall not be ground, puttied, etc.

Seamless round steel pipes with minimum size 35x2.5 or square pipes with a minimum size of 35x35x2.5 mm shall be used. The groin straps of the seat belts can also be attached to these pipes. In this case round pipes with the minimum size of 38x2.5 mm or 40x2 mm shall be used. In the anchorage points of the seat supports, the pipes shall have local reinforcements in the form of welded bushings and support pads in accordance with Figure 2.

To secure the seats and their supports, bolts of a minimum strength category of 10.9 shall be used. It is mandatory to use reinforcing washers with a thickness of at least 2 mm, a size of at least 2.5 diameters of the mounting bolt and at least the size of the hole in the fixed fastener.

It is also allowed to install the seats on the original anchorage points (provided that the anchorage points of the rear supports are located at the distance of the width of the seat). In this case, the anchorage points shall be reinforced with a steel plate with a thickness of at least 2 mm and a width of at least 50 mm. The counterplate shall be welded around the perimeter and through the holes (Figure 3). The minimum area of contact between support, shell/chassis and counterplate is 40 cm² for each anchorage point.

If quick release systems are used, they must be capable of withstanding vertical and horizontal forces of 18 000 N, applied non-simultaneously.

It is allowed to fix the seat on the floor, while all anchorage points must have steel counterplates with a minimum thickness of 3 mm and a minimum area of 40 cm<sup>2</sup> on both sides, as shown in Figure 4.

The minimum thickness of the supports and counterplates is 3 mm for steel and 5 mm for aluminum alloys. The minimum longitudinal dimension of each support is 6 cm. The anchorage points of the rear supports shall be located at the distance of the width of the seat.

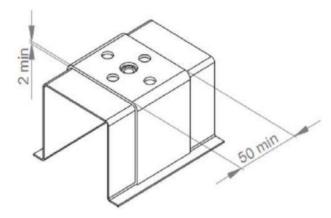


Figure 3

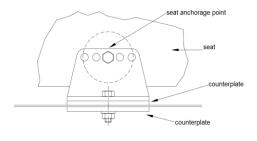


Figure 4

### 1.4 Safety belts.

The car shall be equipped with safety belts with at least 6 points of attachment to the car body. The safety belts must comply with the requirements of Appendix 15 to the Classification and Technical Requirements, except for clause 2.1. Loose straps are not allowed and must be secured. Seat belts must be secured in accordance with the requirements of Article 253-6 of Appendix J to the FIA ISC, RAF Technical List 5 (for HANS)

RAF Technical List 9 (for HYBRID) and manufacturer's instructions. The safety belts installation angles are presented in Figure 5.

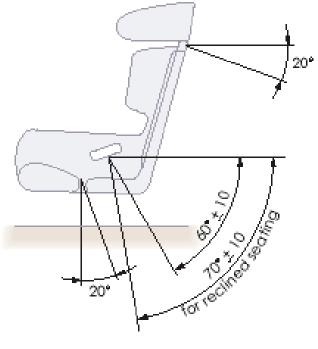


Figure 5

## 1.5 Safety net, arm restraint system.

The front and/or rear doors are allowed to have no window glass. In this case, the driver must use a closed helmet with a visor that completely covers the face. The visor must be completely closed during the race. Using a doorway safety net or SFI 3.3 arm restraint system is compulsory.

When viewed from the side, the net shall extend from the center of the steering wheel to the seat back. The net must be made of braided strips with a minimum width of 19 mm. The size of the net openings varies from 25x25 mm to 60x60 mm. The braided strips shall be made of flame-retardant material, stitched together at each intersection point. The net must not be temporary; it must be attached to the safety cage above the driver's side window, removable with a quick-release connection even in case of a rollover. The net shall be detachable with one hand. The net fasteners must be marked by a bright color (orange, yellow, red).

#### 1.6 Cockpit.

Keeping vessels with any liquids except for driver's water supply system and the ones explicitly allowed by the present TR is not allowed.

All the pipelines and wiring harnesses inside the cockpit shall be securely fastened all along their length.

#### 1.7 Fire extinguishing system

The car must be equipped with a fire extinguishing system that meets the requirements of Article 253 clause 7.2 of Appendix J to the FIA ISC (list of systems and manufacturer's manuals are presented in FIA Technical Lists 16 and 52) or Appendix 6 to the Classification and Technical Requirements. The fire extinguishing system must be installed according to the manufacturer's instructions. The extinguishing agent in the installed fire extinguishing system shall be certified for extinguishing the fuel used in the vehicle. The internal control drive of the fire extinguishing system shall be accessible to the driver buckled to the seat at any moment. The external control drive activating the fire extinguishing system shall be in the immediate vicinity to the external main electric switch or combined with it, and marked with a sticker "Red E in a red circle against white background" with a diameter of 10-12 cm. (Figure 6)



#### 1.8 Circuit breaker (master switch)

Using a spark-proof circuit breaker of electrical equipment is compulsory. The circuit breaker shall de-energize all electric chains of the vehicle. The circuit breaker shall be accessible to the driver sitting in a normal position in his seat with safety belts on. Using a properly functioning external circuit breaker drive is compulsory. The external circuit breaker drive shall be installed underneath the windshield.

If the bonnet is raised at the base of the windshield and/or has no sealing to insulate the engine compartment, the external drive shall be placed on the body panel underneath the rear window or on the side surface of the rear roof pole. Minimum modification of the car body required for the circuit breaker placement is allowed. The external circuit breaker drive shall be marked with a red lightning sign in a white-edged blue triangle. Each edge of the triangle shall be at least 12 cm long (Figure 7).



Figure 7

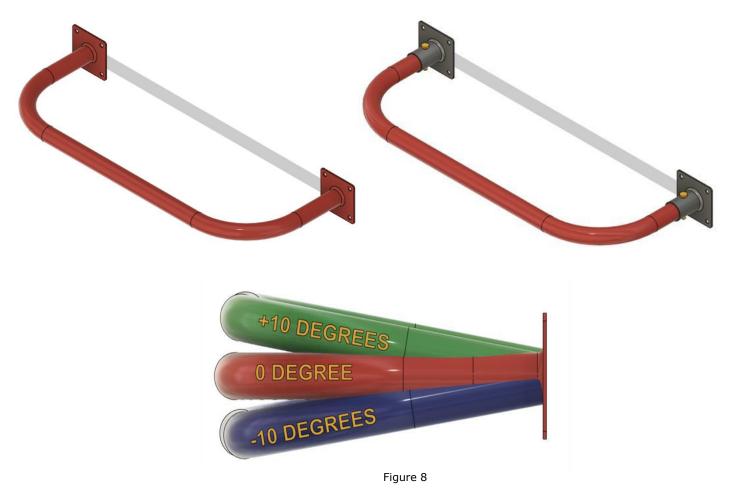
#### 1.9 Bumpers, bumper reinforcement (bash bars) and their fastening

The vehicle must have a front and a rear bumper, as well as the attached safety structures. The factory members shall be fixed to the anchorage points provided by the manufacturer. The non-original safety structures (bash bars) shall be manufactured of a steel pipe of a diameter of 25-44 mm and a wall thickness of 1.6-3.2 mm, bolted to the spars with 4 bolts of 10 mm, strength at least 8.8 on each side, or welded; they shall be horizontal (+/- 10 degrees) (see Figure 8). The pipes shall be hollow throughout, located at a minimum distance from the external bumper wall.

It is allowed to place additional attachment points for the outer bumper shell, fenders, headlights, attachments. The material and design can be various, but they shall not make any sharp dangerous corners.

The outer bumper shell must be securely fastened on at least four anchorage points. No elements attached with zip-ties are allowed.

The bash bars that do not meet the design requirements can only be used with a permission of the event organizer.



#### 1.10 Miscellaneous

No leakage of any liquids, fuels or lubricants from the car is allowed in any position.

# 2. Permitted modifications to the body and chassis of the vehicle.

- 2.1 The car body parts except for those explicitly allowed by the present requirements cannot be removed, lightened or replaced.
- 2.2 Unused equipment fasteners, back seat fasteners, rear windshield shelf are allowed to be removed. The front wheel arches' modification for bigger steering angle is allowed.
- 2.3 For the arrangement of the rear wheel drive, it is allowed to add suspension fasteners and subframes to the strength members of the chassis with a minimum required modification. If such modifications require any interference in the strength members of the body, they must be approved by the event organizer.
- 2.4 The firewall location shall be original. The firewall and the engine tunnel modification is allowed if made with a steel sheet of at least 0.8 mm thickness and the following dimensions: (see Figure 9)

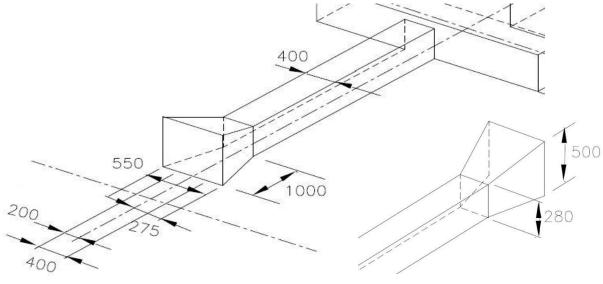


Figure 9

The vehicles previously participating in RDS and RDS GP events before 2018 inclusively with a relevant record in the STP, modifications with the dimensions larger than shown in Figure 9 are allowed if made before the end of the season 2018. No further modifications are allowed except those required to achieve compliance with clause 2.4. Material: steel sheet of minimum thickness of 0.8 mm.

The firewall and the engine tunnel shall be fire and liquid proof in any case.

- 2.5 The front door locks shall be stock and properly functioning. The exterior and interior door handles' structure is not subject to restrictions. If the stock door handle is replaced, it shall be highlighted with a bright, contrast color. The original bonnet and boot locks shall be removed; they are replaced with at least two exterior metal fasteners placed symmetrically to the fore-aft axis of the car, preventing accidental opening of the bonnet or boot when the car is running. It is allowed to modify the structure and location of the bonnet and boot hinges; in this case, their number shall not be less than two and they shall be placed symmetrically to the fore-aft axis of the car. It is allowed to remove the bonnet and boot hinges provided that at least four exterior metal fasteners are present.
- 2.6 Interior front door cards are compulsory; they can be replaced with panels of any flame-retardant sheet material (minimum thickness: metal 0.5 mm, carbon/kevlar 1 mm, plastic 2 mm) preventing the contact of the driver with any inner parts and mechanisms of the vehicle. The roof lining and its fasteners can be dismantled.
- 2.7 Modification of some strength members of the chassis (rear and forward side members) or replacement of such members with a free structure ensuring rigidity of the body is

allowed as shown in Figure 10 (the part outside the axes A1-A1 and A2-A2).

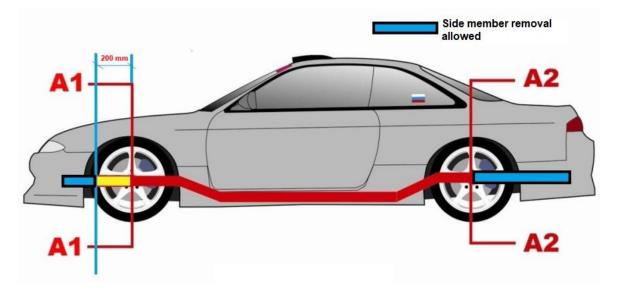


Figure 10.

- 2.8 It is allowed to replace external body panels (front and rear fenders, roof), as well as doors, bonnet and bot lids with the ones made of plastic, carbon fiber or other composite materials. Any air intake openings in bonnet shall be completely closed (when viewed from above) with an air intake hood, casing, or metal mesh. If any rotating elements of the engine protrude beyond the bonnet, they shall be completely covered with a rigid casing.
- 2.9 The windshield shall be multi-layered (such as "triplex safety glass"). It is allowed to use windshield made of polycarbonate, custom fabricated for a specific car. The windshield shall be fastened with the same method as the stock windshield of the given car.
- 2.10 Installing side windows and rear windshield of polycarbonate, with a minimum thickness of 3 mm is allowed; they must be securely fastened. In case of damage (cracks, significant chips), they must be replaced. Installing polycarbonate sliding vents in the side windows for cockpit ventilation is allowed if their size does not exceed 25x35 cm. It is allowed to remove the stock window regulator provided that the glass window is replaced with a polycarbonate one.
- 2.11 The original glass side window and rear windshield shall be covered with a protective film contains shattered fragments in case of break. It is allowed to use tinted film, provided that the driver and the cockpit interior are visible from a distance of 5 m.
- 2.12 The headlights, rear lights and brake lights shall be properly functioning. The original headlights and rear lights can be replaced. The replaced lights' brightness shall be the same as that of the original ones. The replaced lights shall be located in the original positions; the rear lights are allowed to be installed in the cockpit behind the rear windshield. Using strobe lights or flashing headlights is prohibited.

- 2.13 The wheels shall be closed by mudguards (when viewed from above), while the working surface of the wheel can protrude in the upper point but not more than 20% of the tire width indicated in its marking.
- 2.14 The overfenders shall be fastened with a tool or a special glue. Fastening overfenders with double-sided tape or zip-ties is not allowed.
- 2.15 The exterior rearview mirrors are not subject to restrictions. The absence of rearview mirrors and/or using a rearview camera is allowed. The reflective glass elements shall be covered with transparent film containing shattered fragments in case of break.
- 2.16 Rear wings and spoilers are additional car body elements; the designs of these elements are not restricted. The rear wing shall be attached to the car body with a tool. Using quick release attachments is prohibited. The rear wing shall be additionally fastened to the car with two steel cables with a minimum diameter of 3 mm to prevent the loss of the rear wing if the main fastening fails.

### 2.17 Towing eyes.

Towing eyes shall be present in the front and the rear of the car. They shall be strong, accessible, have a closed shape and big enough for a cylinder with a diameter of 60 mm to freely pass through them; the towing eyes shall be painted bright yellow, orange, or red color and shall not protrude beyond the car perimeter (visible from above) by more than 20 mm.

The tow eye's location shall be marked on the car body with bright colored arrows contrasting with the car body color, of a minimum size of 100x50 mm.

- 2.18 It is allowed to install hatches and other cockpit air intake and outlet elements with an area not exceeding 1250 cm<sup>2</sup>.
- 2.19 No part of the vehicle, except for the rims and/or tires, shall touch the asphalt, even when all the tires on one side of the vehicle (left or right) are deflated.
- 2.20 The weight of the vehicle prepared for race including the driver in full gear shall not be below 950 kg and more than 1,500 kg. It is allowed to fix a ballast to increase the car weight. The ballast is located between the vehicle axes, rigidly fastened to the car body/chassis. The ballast is made of solid metal blocks attached to the car body with through bolts or studs with a diameter of at least 8 mm with counterplates. The area of each counterplate is at least 40 cm², minimum thickness 3 mm. Each 20 kg of ballast shall be fixed with at least two mounting points. The ballast shall be sealable.
- 2.21 Placing wires and pipelines between the frame and body panels is prohibited.

## 3. Engine and its systems

One any stock (with a manufacturer's part number) internal combustion engine, gasoline or diesel, is allowed. Electric cars can only be admitted with a permission of the event organizer. Hybrid plants are prohibited.

#### 3.1 Exhaust system

The exhaust system is not subject to any restrictions. All vehicles shall be equipped with an exhaust gas system. The exhaust system shall be metal. All exhaust system components shall be securely connected with each other, fastened to the body or frame of the car.

The end pipe of the exhaust system must be brought back or to the side of the car, while the exhaust must be drawn to the ground at an angle of at least 45° horizontally. The end of the exhaust pipe shall not protrude beyond the perimeter of the body (vertical projection on the bumpers, sills and fenders). The ends of the pipes directed sideways shall be located within the base of the car.

The exhaust gas output shall not be directed towards the wheels or the non-metal parts of the vehicle (bumper, sill pads etc.).

The exhaust pipe shall not pass through the cockpit or any panels of its body, except for the passage of this pipe through a specially manufactured tunnel inside the sill. The tunnel cannot be located on the driver's side.

#### 3.2 Intake system

The intake system is not subject to any restrictions. Air intake from the car cockpit is prohibited.

#### 3.3 Fuel

Only liquid hydrocarbon fuel is allowed: gasoline, diesel fuel, alcohol and mixes thereof. The vehicles using alcohol as fuel shall be marked with the ALCOHOL sticker (see Figure 11) on both sides of the car, in well visible spots, protected from damage. The square sticker's length side shall be 10-12 cm.



Figure 11

#### 3.4 Fuel system

Replacing the original fuel tank with a safe one complying with specifications FIA FT3-1999, FT3.5-1999, FT5-1999 or SFI 28.1 is compulsory for DC-1 class vehicles and recommended for DC-2 vehicles. The tank shall be installed inside the car body; the safest recommended places are between the rear wheel arches, near or above the rear axle casing.

In DC-2 class vehicles, the original fuel tank is allowed to be replaced with a custommade or factory-built tank. If the stock fuel tank is located under the car floor, outside the base, such a tank is subject to replacement and relocation. If replaced, the tank shall be installed inside the car body; the safest recommended places are between the rear wheel arches, near or above the rear axle casing.

If the fuel tank to be replaced is manufactured of plastic and installed near the rear axle of the vehicle, and at the same time a part of the floor and/or rear arches is absent, the fuel tank shall be enclosed in a solid metal container of 1 mm thick steel or 2 mm thick aluminum.

The tank shall be securely fastened according to the manufacturer's instructions with at least two steel strips of a minimum size of 20x0.8 mm. All fasteners the tank is attached to shall be welded to the car body. If the fuel tank is installed in the factory-designed position, it shall be fastened with the method used at the factory.

The fuel tank shall be equipped with a ventilation system. The system shall have an intake outside the vehicle, equipped with a valve preventing fuel leakage in any position of the vehicle, even in case of rollover.

If the fuel tank and/or filler neck are located inside the body, an opening with a diameter of 15 to 50 mm shall be made in the floor to drain the fuel spilled outside the car during refueling.

The fuel tank and its filler neck shall be separated from the interior by a fire-proof and liquid-proof rigid casing or a rigid partition (compulsory for two-box cars).

It is allowed to use an additional catch tank, with a maximum volume of 3 liters. It shall be securely fastened in the immediate vicinity to the main tank or in the engine room. All connected fittings and fuel lines must be of the aircraft type.

The number, brand, and location of fuel pumps are not subject to any restrictions. All the fuel pumps installed inside the cockpit shall be enclosed in a sealed liquid-proof and fire-proof container.

The fuel lines are allowed to be located in the cockpit; all of them must be manufactured of metal or aircraft type pipelines with now connectors inside the cockpit, except for the thread connections at the spots of passage through the floor or the car body panels (see Fig. 253-59, 253-60 of Appendix J Article 253 clauses 3.1-3.2).

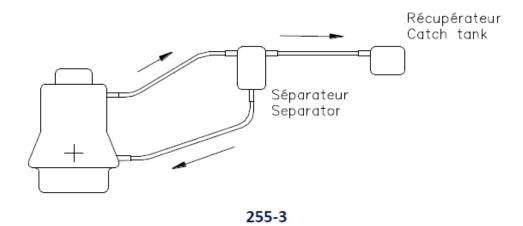


Placing the fuel line in the immediate vicinity of the driveshaft and the exhaust system is prohibited.

#### 3.5 Crankcase lubrication and ventilation system

The lubrication system, including that of with a dry crankcase, is not subject to restrictions. For the cooling air intake, openings in the body covered with metal mesh can be made. The oil lines shall be made of metal or of aircraft-type with a metal-braided sheath and separated from the cockpit. If the oil tank is installed outside the engine compartment, it shall be separated from the cockpit with a waterproof and fire-proof metal casing.

Using open crankcase ventilation system is allowed. Such a system shall be equipped with a separator (see Figure 255-3) with a maximum volume of 1 liter. Oil from the oil collector flows to the engine only under gravity. All gases are discharged into a tank of semi-transparent liquid plastic or with a transparent panel, with a minimum volume of 2 liters, which prevents liquid leakage in any position of the car; the tank shall be securely fastened in the engine compartment. The crankcase gas vent tank shall not be installed near the exhaust system elements.



The internal combustion engine oil dipstick shall be secured to prevent oil leaks through the dipstick tube.

#### Nitrous oxide (N<sub>2</sub>O)

The nitrogen supply lines shall be located outside the cockpit, except for the situation when the cylinder(s) is(are) installed in the cockpit; then, the nitrogen supply line shall be drawn outside the cockpit, as close to the cylinder outlet as possible. In the places where the nitrogen supply lines pass through the flywheel plane, they must fit in a steel pipe casing with a minimum wall thickness of 3 mm. A high-pressure hose designed for a minimum pressure of 10.5 MPa shall be used.

The cylinder(s) shall be installed outside the engine compartment. The cylinder(s) located inside the cockpit shall be mounted with metal braces fixed on the car body/chassis and equipped with an emergency bypass valve placed outside the cockpit. In case of longitudinal arrangement, a thrust bracket preventing movement of the cylinder is compulsory.

The cylinders shall be equipped with opening/closing valves. Using cylinder closing systems requiring special wrenches is not allowed. The cylinders used must be designed for nitrous oxide.

The electrical appliances used to heat the nitrous oxide cylinders shall be designed for this purpose by the manufacturer. Modification of such appliances is prohibited. The system shall be installed in strict compliance with the manufacturer's instructions.

All vehicles using nitrous oxide shall be marked with a green diamond-shaped sticker with a side length of 10-12 cm, with "NITROUS OXIDE SYSTEM N2O" written in white letters (see Figure 12) on both sides of the car, in a spot protected from damage.



Figure 12

#### 3.6 Pressure charging.

Any type superchargers are allowed.

The intercooler, its working principle (air-to-air, air-to-coolant, air-to-ice) and location are not subject to restrictions within the outer contour of the car body. Placing the intercooler inside the cockpit is prohibited.

## 3.7 Cooling system

The cooling system elements are not subject to restrictions.

If the cooling radiator is installed in the luggage compartment of the car, the cooling air shall not be taken from the car cockpit and the radiator shall be separated from the cockpit with a liquid-tight screen.

If the radiator pipelines pass through the cockpit, they shall be metal or of aircraft type, solid without connections and closed with a liquid-tight screen, completely separating the pipeline from the cockpit.

Only water is allowed to be used as a coolant in the cooling system. Using any special anti-wear and anti-corrosion additives is allowed. Using antifreeze is prohibited.

# 4. Steering system.

4.1 Any closed-rim steering wheel is allowed except for those manufactured or having elements of wood.

- 4.2 The steering mechanism is not subject to restrictions. The hydraulic power steering is allowed to be replace with electric power steering and vice versa.
- 4.3 It is allowed to install a steering wheel hub-adapter of a single metal blank, attached to the steering shaft with an original method; the maximum length of the adapter is 200 mm. A steering wheel quick release mechanism is allowed. The quick release mechanism shall include a ring concentrically adjusted and installed on the steering column under the steering wheel, anodized in yellow color or covered with any other durable yellow coating. The wheel is released by moving the ring along the wheel column axis towards the steering wheel.
- 4.4 The ignition switch mechanical locking device shall be removed.
- 4.5 The vertical angle of the steering column may be changed.

# 5. Braking system

- 5.1 A properly functioning braking system is compulsory.
- 5.2 When the brake lines are arranged inside the cockpit passing through bulkheads both between the engine compartment and the cockpit, and between the cockpit and the boot, it is allowed to make the minimum of necessary openings. In such case, all possible gaps that may occur in such openings shall be tightly and securely sealed. If the brake lines pass through the cockpit, the lines shall be made of metal pipes or aircraft-type hoses with external metal sheath.
- 5.3 Original rubber brake hoses may also be replaced with aircraft-type flexible hoses; appropriate adaptors shall be used for connection.
- 5.4 The brake disk covers may be removed.
- 5.5 Liquid cooling of the brakes is prohibited.
- 5.6 In any case, brake mechanisms, as well as factory-made brake disks or drums must be used.
- 5.7 A hydraulic handbrake is allowed to be installed on any axis of the vehicle.
- 5.8 Brake fluid tanks can be installed in the cockpit if their total volume does not exceed 0.5 liters and their design is spill-proof even in case of rollover.

## 6. Transmission

6.1 The transmission is not subject to restrictions.

- 6.2 Modifications required to change the drive type from front/full to rear in compliance with the current Technical Requirements are allowed.
- 6.3 Changing the drive type using electronic devices (all-wheel drive controllers) is prohibited.
- 6.4 The clutch mechanism shall be engaged only by the physical force of the driver.
- 6.5 A cardan trap loop shall be installed at a maximum distance of 150 mm from the front crosspiece center. It shall be made of a steel strip of a minimum width of 50 mm and thickness of 5 mm, or of a steel pipe of a minimum diameter of 20 mm and wall thickness of 1.5 mm (see Figure 12). The loop shall be fastened on the car body with at least two bolts, one on each side, of a diameter of 8 mm. The mounting spots on the car body shall be reinforced on both sides with counterplates with a minimum area of 40 cm² and a thickness of 3 mm. If a two-piece driveshaft with an intermediate bearing is used, the stock intermediate bearing mount shall be reinforced, or, if necessary, two loops can be used.

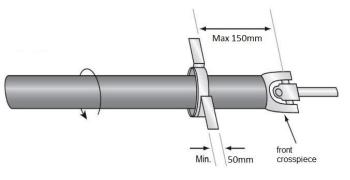


Figure 13

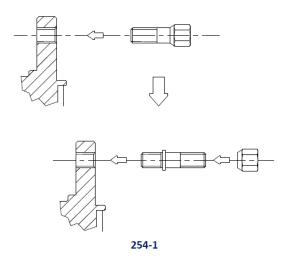
## 7. Tires

- 7.1 It is allowed to use any kind of tires except for studded tires with an industrially fabricated tread pattern created when the tire was produced, without visible damage or deformation.
- 7.2 No chemical treatment of tires is allowed.
- 7.3 It is forbidden to use tires damaged or worn so that the cord is exposed.

## 8. Wheel disks.

- 8.1 The wheel disk designs are not subject to restrictions, but they must be made of metal.
- 8.2 Disks made of magnesium of magnesium-based alloys are prohibited.
- 8.3 All wheels shall be securely fastened with wheel bolts or nuts. The bolt fixtures are allowed to be replaced with pins and nuts provided that the disk and wheel hub connection

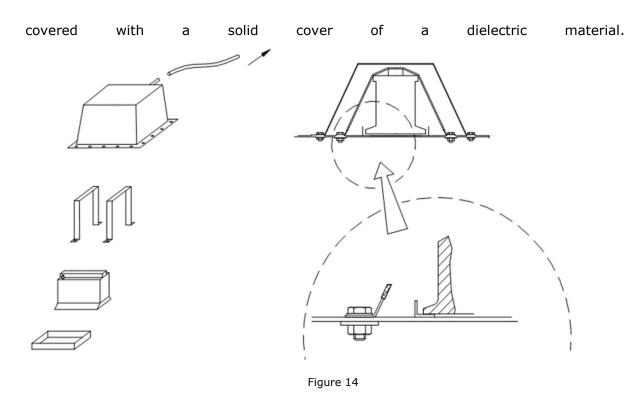
dimensions are respected (see Fig. 254-1). The bolts shall be screwed into the hub at least to the full depth of the hub thread hole. No damage of the wheel pins is allowed. The pins shall not protrude beyond the outer plane of the wheel disk.



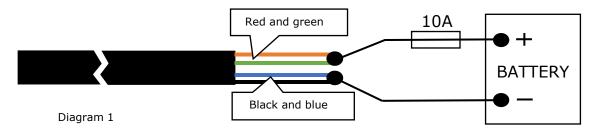
- 8.4 Decorative wheel trims shall be removed.
- 8.5 To increase the track, it is allowed to use spacers to align the wheel relative to the hub.

## 9. Electric equipment

- 9.1 It is allowed to move the battery from its standard location. The battery may be located in the cockpit or the boot of the car in the space between the side members, as far from the rear bumper as possible.
- 9.2 In any case, the battery shall be securely fastened. For this purpose, it is recommended to reinforce the original battery fastening. In such case, the following car body modifications are allowed: drilling additional mounting holes in the battery pad, welding on additional eyelets to secure the battery.
- 9.3 If relocated, the battery shall be attached to the car body with a metal socket (flanged pad) and two metal clips of at least 20x0.8 mm with an insulation coating, attached to the chassis base with bolts or pins with a minimum diameter of 10 mm and counterplates between each bolt or pin with a minimum thickness of 3 mm and minimum area of 20 cm², located on the back side of the body panel (see Figure 14). To check their thickness, an opening is made in the plates. A liquid electrolyte battery shall be closed with a liquid-tight dielectric casing fixed independently from the battery, with a ventilation with an outlet outside the car body. If a dry battery is used, the battery and its terminals shall be



- 9.4 The bundles of wires inside the cockpit shall be enclosed in protective shells to prevent damage.
- 9.5 The openings in the car body drilled for the wire bundles shall have a rubber trim that tightly fits the wire bundle.
- 9.6 The purpose of all electric switches and controls (tumblers, buttons etc.) shall be indicated either with an inscription or a legible pictogram.
- 9.7 No electronic and/or mechanic driver assistance systems are allowed. The traction and torque control systems, any vehicle position control systems (stability control system, ABS and others). Speed sensors on the wheels and driveshafts, steering wheel position sensors and other steering controllers, gimbal speed controllers shall be removed.
- 9.8 All DC-1 group vehicles shall be equipped with a cable for Drift Dynamics © connection. The cable shall be connected directly to the battery terminals through a 10A fuse. The cables are provided by the event organizer. See Diagram 1 below.



# 10. Suspension

- 10.1 All vehicles shall be equipped with suspension. At least one shock absorber on each wheel is compulsory.
- 10.2 Elastic elements (springs, torsion bars, leaf springs etc.) are not subject to restrictions.
- 10.3 Bump stops are not subject to restrictions.
- 10.4 It is allowed to replace all elastic suspension joints with more rigid ones.
- 10.5 Shock absorbers and their supports are not subject to restrictions.
- 10.6 Stabilizer bars are not subject to restrictions.
- 10.7 Shock absorbers' and stabilizer bars' remote control systems are prohibited.

#### CHAPTER 2

## Requirements to DC-3 class drift cars

The vehicles equipped with a safety cage shall comply with the requirements of Chapter 1. The use of the safety cages not complying with the requirements of clause 1.2 Chapter 1 hereof may be additionally described by the event regulations.

The requirements below are applied only to the vehicles not equipped with a safety cage. Teneral requirements described in Chapter 1 hereof apply only if explicitly stated below.

#### Safety

No strength members of the vehicles can be modified except for listed below, including bumper mounting spots, bumper fasteners, the bumpers themselves and their inner reinforcements. No permanent inner and outer panels of the car body can be modified except for those explicitly allowed as prescribed below.

#### 2. Car body

Detachable outside car body panels, such as front fenders, bonnet, boot lid, can be replaced with non-original ones, including those manufactured of a different material. Fender expansion is allowed, including using overfenders; in such case, the part of the original fender underneath the overfender is removed. The front wheel arches' modification for bigger steering angle is allowed. Additional mounting points for non-original transmission and/or rear suspension subframes can be arranged. Rear wings and spoilers can be installed. All exterior lights with glass reflectors, as well as reflective elements of the exterior rearview mirrors shall be covered with transparent film containing the shuttered elements in case of an accident.

#### 3. Cockpit

The cockpit shall be separated with fire-proof and liquid-proof sealed partitions from the engine compartment and the luggage compartment if the fuel tank is installed there. No tanks and liquid pipelines can be located in the cockpit except for those explicitly allowed by the present requirements. Removing the front passenger seat, back seat, back door cards, ceiling lining, and boot lining is allowed. The windshield shall be multi-layered, factory-manufactured. On the interior, the side windows shall be covered with a protective film to contain the shuttered fragments in case of accident. The side window glass can be replaced with polycarbonate of a minimum thickness of 3 mm; in this case, the window regulator may be blocked or removed. The driver's seat shall be fabricated; using a seat of another stock vehicle is allowed. The seat shall be mounted on the manufacturer-supplied attachments. The seat belts shall be factory-manufactured; using EC certified ("club car seat belts") motorsport seat belts is allowed. Using a rigid sports seat is allowed; in such case, both the seat and its

fasteners shall comply with clause 1.3 Chapter 1, and the seat belts shall comply with clause 1.4 Chapter 1 hereof.

#### 4. Engine and its systems

Engine modification is not subject to restrictions. The engine can be replaced with a non-original one, regardless of the manufacturer, provided that its location and mounting points are not changed. The exhaust system shall comply with clause 3.1 Chapter 1 hereof. The cooling radiator can be relocated; in this case, it must be placed inside the car body, and its location including air ducts shall be separated from the cockpit with a sealed partition resistant to high-temperature cooling liquid. No parts or pipelines of the cooling system can be located inside the cockpit. The fuel tank shall be fabricated and installed at its original place. Universal fabricated tanks can be used; such a tank shall be fixed inside the boot with two steel strips of a minimum width of 20 mm and thickness of 0.8 mm, as close to the rear axle as possible, between the wheel arches. In such case, the luggage compartment shall be separated from the cockpit with a flame-proof and liquid-proof partition. The fuel tank shall be equipped with a ventilation system with an outlet outside, and a valve preventing fuel spills. The fuel pipelines shall be original and located at the original place. The pipelines can be replaced with full-metal or metal-braided aircraft type hoses. Using anti-surge tanks is prohibited.

#### 5. Transmission

The engine torque shall be only transmitted to the rear wheels. The flywheel, clutch, and transmission are not subject to restrictions. The clutch drive can be only mechanical, engaged by the physical force of the driver. The gearbox is mechanical, of non-sequential type. Full or front wheel drive is allowed to be replaced with the rear wheel drive. Electronic torque distribution systems are prohibited.

#### 6. Suspension

Levers, springs, shock absorbers, joints are not subject to restriction. The original lever mounts inside the car body shall be preserved. Subframes are allowed to be installed or replaced; additional mounting points can be arranged on the car body for this purpose.

### 7. Steering system

The steering system shall comply with clause 4 Chapter 1 hereof.

### 8. Brake system

Brake mechanisms shall be factory-manufactured; they are allowed to be replaced with the same parts of any other stock vehicles. The minimum number of brake contours is two. The vacuum booster and the ABS system can be removed. A brake force regulator can be installed; it shall be located in the cockpit. The handbrake can be equipped with a hydraulic drive; for this purpose, it is allowed to install a hydraulic cylinder and an expansion tank inside

the cockpit. The tank of a maximum volume of 100 ml shall be equipped with a lid that prevents liquid spills in any position of the vehicle. The pipelines shall be either full-metal or arranged of metal-braided aircraft-type hoses. The handbrake lock may be disengaged or removed. Using the floor pedal assembly is not allowed.

## 9. Electric equipment

The battery can be moved from its original location. In such a situation, its location and fastening in the new place shall comply with the requirements of clause 9.3 Chapter 1 hereof; the vehicle shall be equipped with the electric circuit breaker with an external drive as per the requirements of clause 1.8 Chapter 1 hereof.