

ADAC

formel masters



Technical Regulations

2012

ADAC Formula Masters

Last update: 06 February 2012

Amendments according to Bulletin 01/2012 have been incorporated.

4.1 Unique series vehicle

ADAC Formula monocoques are single-seater racing cars of the Free Formula category (Group E2), as specified in Art. 277 of Appendix J to the ISC.

The complete vehicle is manufactured by Dallara AUTOMOBILI Spa.

4.2 Basis of technical regulations for the series

Technical regulations shall be issued in DMSB approved Technical Bulletins, clarifications and instructions published by the organisers and based on:

- Art. 277 of Appendix J to the ISC (FIA)
- general provisions, definitions and clarifications relating to technical regulations (blue section of DMSB Yearbook)
- the present Technical Regulations.

4.3 General

Anything the present Technical Regulations do not specifically allow shall be prohibited.

The only spares allowed shall be those listed in the official ADAC Formula Spare Parts Catalogue or complying with the present Technical Regulations.

Any changes must specifically be allowed in the present Technical Regulations and cleared with the ADAC Formula Masters Technical Delegate.

Bulletins shall define the latest version of the catalogue.

No other spares shall be allowed (e.g. brake discs, wheels etc.). The modification of parts shall be prohibited (e.g. wheel bearings, burnishing/machining of gearbox parts etc.)

A DMSB vehicle pass shall be mandatory.

4.4 General provisions, allowed modifications and add-ons

Normal maintenance work or the replacement of worn or accident-damaged parts shall be allowed.

The addition or removal of material shall be prohibited unless expressly allowed in the present Technical Regulations.

The allowed scope and extent of modifications or add-ons is defined below. Worn or accident-damaged parts must be replaced with identical original parts. All parts and modules must comply with the present Technical Regulations or the ADAC Formula Spare Parts Catalogue.

In the complete vehicle, standardised fasteners such as nuts, bolts, washers, spring or lock washers and cotter pins can be replaced by standardised parts meeting equal or higher standards, provided that they comply with the respective standard. Threads must comply in form, depth, length and lead. No titanium screws shall be allowed. Nuts and bolts may be shortened provided that their function is preserved. K nuts may be used instead of Nylstop nuts.

Thread inserts installed in the lower part of the monocoque to connect it with the side pod may be enlarged to M6 at the most.

Quick-release fasteners for clutch, brake and fuel lines shall be allowed provided they meet racing specifications.

The organisers may require the installation of additional equipment (cameras, control units etc.).

In the left-hand side pod (F00703A004 LH Sidepod), the cutout above the exhaust should be made as evident from the schematic in the ADAC Formula Spare Parts Catalogue.

In the variant left-hand side pod (F00703A004(OLD) LH Sidepod (Closed Side)), the cutout is permitted on the front face as evident from the drawing in the ADAC Formula Spare Parts Catalogue.

The cutouts must be closed with gratings.

4.5 Vehicle parts repair and homebuilt parts

4.5.1 Repair

The repair of parts of the bodywork (definition according to ISC Appendix J, Article 275.1.4) shall be allowed on the condition that their material, shape/dimensions and function are maintained.

The repair of the following parts shall be permitted only if approved by the Technical Delegate:

- front crash structure
- front/rear wings

Repair of the following parts shall not be permitted:

- Side boards on front/rear wings
- rear crash structure

Accident-related damage to the monocoque shall be repaired only by the manufacturer, Dallara AUTOMOBILI Spa.

The repair of any parts other than those mentioned above shall be forbidden.

4.5.2 Homebuilt parts

The following parts may be homebuilt within the limits indicated:

Scuff moulding

The lateral apron of the lower side pod is defined as a scuff moulding. The scuff moulding may be made, or the original part modified, as evident from the schematic in the ADAC Formula Spare Parts Catalogue.

Gear change lever

The top of the gear change lever (F00717A003 Gear Change Lever Knob) may be replaced by a cylindrical part made of steel or aluminium with a maximum diameter of 70mm and a maximum length of 200mm.

Pedal stops

There shall be no restrictions on pedal stops. Pedal stops are mandatory.

Push rods for clutch and accelerator pedals

There shall be no restrictions on push rods for the clutch and accelerator pedals. Pedal stops are mandatory.

Catch tank

Each vehicle must be equipped with a liquid-tight catch tank which shall hold at least 1l. The tank and lines must be made of oil-resistant material. The tank must be installed safely in the space on the right between the engine and the battery. All breather and overrun lines (water and oil) must vent into the catch tank. Catch tanks may have a liquid-tight vent.

Catch tanks must be inspected and approved by the Technical Delegate or his deputy at the first meeting in which the vehicle participates.

4.6 Minimum weight and ballast

At all times during meetings, the vehicle must weigh at least 570kg incl. the driver with full equipment (helmet, overall etc.).

The driver incl. equipment (helmet, overall etc.) shall be weighed at the beginning of the meeting. The weight thus determined shall be communicated to the driver and confirmed by the driver's signature on-site. The confirmed weight shall be applicable to subsequent examinations throughout the meeting.

When the vehicle requires ballast, ballast shall be installed in the position designated by the manufacturer at the dashboard bulkhead (see Figure 1). The bulkhead supports max. 7kg of ballast. Fastenings must withstand a 25g deceleration. To achieve this, at least two M8 screws with washers must be used.

Additional ballast may be installed under the driver's seat in the original control unit location.

An opportunity must be provided to secure the ballast with sealing wire.

Should a vehicle lose a part during qualifying practice or events, this part can be weighed in with the vehicle. After consulting the Technical Delegate, the Stewards of the Meeting shall decide if and which part shall be taken into consideration when weighing.

4.7 Emissions/catalytic converters

The current DMSB emissions regulations (blue section of DMSB Yearbook) apply.

Catalytic converters compliant with DMSB homologation no. RC 9012-10 must be used.

The catalytic converter must be functional at all times. Protests against the catalytic converters' conversion rates shall be inadmissible.

4.8 Noise

The vehicles must comply with DMSB noise level group C requirements, i.e. max. noise power levels (L_{wa}) of 132dB(A) and max. noise pressure levels (L_p) of 100dB(A) (as specified in DMSB noise regulations).

Noise levels shall be measured using the DMSB pass-by method.

4.9 Safety

The provisions of Art. 277, Appendix J to the ISC shall apply.

Vehicles must be fitted with the safety equipment specified below. Unless specified otherwise, the article references refer to Appendix J to the ISC.

- fuel lines and pumps as specified in Art. 259.6.2
- double circuit brakes as specified in Art. 253.4
- safety belts as specified in Art. 259.14.2.1
- fire extinguishers as specified in Art. 275.14.1
- roll-over structures as specified in Art. 277
- safety structures as specified in Art. 275.15.2 and 15.3
- rear-view mirrors as specified in Art. 275.14.3
- towing eyes as specified in Art. 259.14.6
- general circuit breakers as specified in Art. 253.13
- safety fuel bladders conforming to FIA Standard FT3-1999 as specified in Art. 275.6 1.1
- firewalls as specified in Art. 259.16.6
- headrests as specified in Art. 275.14.6
- rear lights as specified in Art. 275.14.5
- reverse gear as specified in Art. 275.9.3
- pressure control valves on tyres shall be forbidden as specified in Art. 253.17
- wheel tethers, 1 per wheel

4.10 Seats

Individually fitted seats shall be required. They must be upholstered in non-flammable materials.

In regular seated position, the driver's helmet must be at least 70mm below a line extending along the vehicle's longitudinal axis from the front roll-over structure to the rear roll-over structure as specified in Art. 275 15.2.2. (see Appendix, Figure 2).

The driver's helmet must be within 50mm of the headrest's leading edge.

4.11 Headrests

Headrests must be painted in commercially available paint and may be taped with transparent, low-friction tape to protect the paint.

4.12 Steering

All screws along the steering column must be secured with a wire passing through bore-holes in the bolt.

The steering wheel must be at least 50mm below a line extending along the vehicle's longitudinal axis from the front roll-over structure to the rear roll-over structure as specified in Art. 275 15.2.2.

4.13 Fuel and oils

Fuel

No fuel other than that designated for the meeting by ADAC e.V. may be used. At no time during a meeting shall the tank vehicle contain any fuel other than the mandatory fuel after scrutineering. The fuel sold shall be Premium 98 and shall be at least DIN EN 228-compliant. The mandatory fuel must not be modified. No substances may be added or eliminated or modified in their concentrations. There shall be strictly no mixing with other types of fuel. The fuel prescribed by ADAC e.V. for all 2012 ADAC Formula Masters events shall be supplied by Shell.

All vehicles must be equipped with a self-sealing sample port allowing the Technical Delegate or his deputy to take fuel samples from the fuel tank. The sample port must be of a FIA-approved type (in accordance with FIA Technical List no. 5).

A hose for external de-fuelling may be installed in the tank. This hose shall not be used for sampling. The fitting at the extraction point must comply with racing specifications.

Unless otherwise stipulated in the event organiser's supplementary regulations or in the track scrutineering protocol, fuelling and de-fuelling of the competitors' vehicles shall be allowed only inside the team tents. There shall be no fuelling and de-fuelling during a session (practice, qualifying, race) nor in the starting grid for an race.

Engine and transmission oil

The mandatory engine oil is Castrol Edge Formula RS 10W-60. The mandatory transmission oil is Castrol SAF-X 75W90.

The mandatory oils may not be modified in any way. No substances may be added or eliminated or modified in their concentrations. There shall be strictly no mixing with other oils.

Coolant additive

The coolant additive must comply with specification TL-VW 774 F and be mixed with water at a 50:50 ratio.

4.14 Checks

4.14.1 Fuel, coolant and oil checks

a) Before each meeting, a reference sample of the fuel designated for the meeting in the event host's supplementary regulations shall be taken on the race track. If at the race track the fuel is stored in several containers, a suitable reference sample shall be taken from each container (for the purposes of this provision, the separate compartments of a fuel tanker shall not be considered separate containers).

The fuel samples shall be kept in capped leak-proof (gas and liquid) sample containers. Each sample shall be distributed between three containers to be used as follows:

- one container for the Scrutineers to analyse
- one container for the event host
- one container for the fuel supplier

The sample containers shall be marked and sealed.

b) The competitors' vehicles shall still have sufficient fuel in their tanks, including but not limited to after the qualifying sessions and after the races, to allow the removal of a 1.0 kg fuel sample at the sample port defined in Art. 4.13.

The Technical Delegate or the Scrutineers may take fuel, coolant and oil samples from the competitors' vehicles at any time during a competition.

The samples shall be kept in capped leak-proof (gas and liquid) sample containers. Each sample shall be distributed between three containers to be used as follows:

- one container for the Scrutineers to analyse
- one container for the organiser
- one container for the entrant

The sample containers shall be marked and sealed.

d) If at the race track the fuel supplier distributed the mandatory fuel from several containers, a sample from each container shall be analysed and compared with samples from competitors' vehicles.

4.14.2 Tyre checks

a) At each meeting, before tyres are distributed to the competitors, a reference sample of the tyre contingent designated for racing shall be taken at the race track.

b) The tyre samples shall be kept in capped leak-proof (gas and liquid) sample containers. Each sample shall be distributed between three containers to be used as follows:

- one container for the Scrutineers to analyse
- one container for the event host
- one container for the tyre supplier

The sample containers shall be marked and sealed.

c) At all times during an ADAC Formula Masters meeting, the tyres used must comply with manufacturer's specifications. The Technical Delegate or the Scrutineers may take tyre samples from the competitors' vehicles at any time during a competition. The tyre samples shall be kept in capped

leak-proof (gas and liquid) sample containers. Each sample shall be distributed between three containers to be used as follows:

- one container for the Scrutineers to analyse
- one container for the event host
- one container for the entrant

The sample containers shall be marked and sealed.

4.15 Engine

Only sealed original 1.6l FSI VW engines – ADAC Formula Masters specification – leased from VWM shall be allowed (see Art. 3.9).

Engine ID numbers FD 07 02 xxx or DMSB 07 xxx

Engines delivered by VWM for the 2012 ADAC Formula Masters or any parts thereof must not be worked on in any way. No engine parts must be removed, added or replaced by items with different part numbers and which were not purchased from or distributed by VWM. Offenders shall be reported to the Stewards of the Meeting and DMSB.

For the purposes of this provision, engines shall include all mechanical and electrical components (including engine cable harnesses) delivered by VWM.

Safety seals

Safety seals attached by VWM secure the engine, control unit and the anti-theft device. The entrants shall be personally responsible for keeping the safety seals complete and intact from the moment of delivery by VWM before the 2012 season until the moment of return to VWM after the last ADAC Formula Masters meeting.

Under no circumstances must the safety seals attached by VWM to the control unit, the anti-theft device and the engine be removed and/or damaged. Should the seals be lost or damaged, the Technical Delegate of the ADAC Formula Masters and Björn Tauber of VWM (address: Volkswagen Motorsport GmbH, Ikarusallee 7a, D-30179 Hannover) must be informed without delay and in writing.

Control module/anti-theft device

The control module and the anti-theft device are the property of VWM. VWM shall report any modifications to or manipulations of the hardware or software of these devices as well as attempted manipulation to the Stewards of the Meeting and DMSB.

Replacement of parts/repair

The replacement of parts and modules (as specified in the ADAC Formula Spare Parts Catalogue, VW List B) shall be allowed, provided that the replacement parts in question were procured through VWM. No modification whatsoever of such parts shall be allowed.

The replacement and repair of add-on parts (as specified in the ADAC Formula Spare Parts Catalogue, VW List A) shall require the prior written consent of VWM, otherwise they shall be prohibited. Any add-on part defects must be reported in writing to VWM.

4.16 Power train

4.16.1 Gearbox

Only Hewland 5-speed FTR gearboxes as specified in the Formula ADAC Spare Parts Catalogue and Hewland gears with the following part numbers shall be allowed:

Position	Pair of gears	Gear ratio	Part no.
1 st gear	12/38	3.17	FTR-12:38-INT
2 nd gear	13/30	2.31	FTR-13:30-HUB
2 nd gear	15/32	2.13	FTR-15:32-HUB
2 nd gear	16/30	1.88	FTR-16:30-HUB
3 rd gear	16/30	1.88	FTR-16:30-STD
3 rd gear	15/26	1.73	FTR-15:26-STD
3 rd gear	16/26	1.63	FTR-16:26-STD
3 rd gear	16/24	1.5	FTR-16:24-STD
4 th gear	17/23	1.35	FTR-17:23-STD
4 th gear	19/27	1.42	FTR-19:27-STD
4 th gear	20/25	1.25	FTR-20:25-STD
4 th gear	20/26	1.3	FTR-20:26-STD
5 th gear	18/22	1.22	FTR-18:22-STD
5 th gear	19/21	1.11	FTR-19:21-STD
5 th gear	19/22	1.16	FTR-19:22-STD
5 th gear	21/24	1.14	FTR-21:24-STD
5 th gear	21/25	1.19	FTR-21:25-STD
5 th gear	24/27	1.13	FTR-24:27-STD

Only the standard bearings and seals of the type delivered by Hewland shall be allowed.

The axle ratio is 12/34.

Selector racks may be deburred according to Hewland specifications. No further gearbox tooling shall be allowed.

All vehicles must be equipped with a reverse gear that can be engaged any time when the engine is running and can be used by the driver in his/her normal seating position.

4.16.2 Differential

Only the original Hewland differential **without** differential lock as specified in the ADAC Formula Spare Parts Catalogue shall be allowed.

4.17 Brakes

The brake system consists of 2 separate brake circuits (front, rear), with brake balance adjuster to set brake pressure distribution.

Only the master brake cylinders, wheel brake cylinders and discs listed in the ADAC Formula Spare Parts Catalogue must be used. There shall be no restrictions on brake pads.

The brake lines shall run along the front face of the transverse control arms and shall be fastened to the fastening points specified by the manufacturer.

There shall be no restrictions on fitting an overflow bottle to the brake/clutch fluid reservoirs.

Used brake discs must have a minimum peripheral thickness of 18.8mm and a minimum weight of 4520g.

4.18 Suspension

Every vehicle shall be equipped with fully independent double wishbone suspension on each wheel. The wheels shall be centre-lock.

The struts are McPherson type (damper & coil spring). The control arm bushings must be left in their original installed position. They must not be exchanged.

There shall be no restrictions on wheel alignment (toe and camber). The use of spacers shall be prohibited.

Suspension – front

The spacer on the front lower wishbone must be installed above the uniball (see Figure 4).

Suspension – rear / fastening points

Only the use of the screw connecting points indicated in Figure 5 shall be allowed.

Dampers

Manufacturer: Sachs

Front: 88 1700 141 426

Rear: 88 1700 141 446

Damper reconfiguration shall be prohibited.

Springs

Only the following springs from Eibach and H&R shall be allowed. The springs must comply with the specifications of the ADAC Formula Spare Parts Catalogue.

Stiffness	Designation
300	Damper Spring C300
400	Damper Spring C400
500	Damper Spring C500
600	Damper Spring C600
700	Damper Spring C700
800	Damper Spring C800
900	Damper Spring C900
1000	Damper Spring C1000
1100	Damper Spring C1100
1200	Damper Spring C1200

Stabilisers

Only the original anti-roll bars may be used. Unhooking the rear anti-roll bar shall be allowed.

The front anti-roll bar may be reconfigured and compensated with spacers (2, 5, 9 and 20mm) as specified in the Dallara Manual.

Bumpstops/packers

There shall be no restrictions on bumpstops and packers.

4.19 Skid block

A wooden skid block (plank) is mandatory. An original Dallara skid block from the ADAC Formula Spare Parts Catalogue must be used. The skid block must not be modified. Apart from wear in driving, no material must be added or removed, either manually or by machining.

4.20 Wheels and tyres

Dunlop is the designated tyre supplier of this series. Any modification or cutting of the tyre tread or the tread pattern shall be prohibited. No chemical, mechanical or thermal treatment of the tyres shall be allowed. This prohibition includes the use of microwaves and/or infrared systems.

Exceptions:

- Water cooling of the tyres shall be permitted
- Any dirt (stones / pick-up) on the tyre tread of the dry-weather tyres may be removed using thermo-mechanical scrapers.

No device of any kind may be used to increase the tyre temperature. Tyres may not be covered while vehicles line up in the starting grid.

Tyres may be filled only with chemically unmodified compressed ambient air or with nitrogen.

All dry-weather tyres must carry a marking (bar code label) incorporated during their manufacture and allowing unambiguous identification of each tyre. Prior to the free practice of an ADAC Formula Masters event, the bar code labels of the dry-weather tyres eligible for that event shall be registered by the Scrutineers. The following must be respected:

- All tyres to be newly registered must come from the stock the tyre supplier keeps on-site at the circuit.
- The tyre supplier may not take back tyres which have already been registered by the Scrutineers.

Reports indicating the registered bar code numbers shall be submitted to the participants for verification and signing.

At any time during a meeting, the Scrutineers and the official assistant Scrutineers may check the tyres in relation to their correct identification and for compliance with the regulations. All participants must allow such checks and provide the necessary assistance for them to be carried out.

The Technical Delegate shall have the right to exchange any tyre of a single car against a tyre from the tyre manufacturer's stock at any time during a meeting until 2 hours before the qualifying or the race, at his own discretion.

Any breach of these regulations and the use of tyres without appropriate identification may result in a drop in grid positions or in non-classification in the race. The Stewards may inflict additional penalties.

The Technical Delegate shall have the right to keep the tyres under lock and key before, during and after timed practices and races.

We recommend the use of tyre valve caps during any test and practice sessions, qualifying and races.

Tyres must be mounted in such a manner as to leave the Dunlop name clearly visible head-on.

Metal valves shall be mandatory.

Tyres

Manufacturer: Dunlop

front	rear
190/535-R13	205/570-R13

Rims

Specifications according to ADAC Formula Spare Parts Catalogue

Manufacturer: Motec (AVO Fahrzeugtechnik)

front 9x13	rear 9x13
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Dry-weather tyres

a) Each car shall be allocated a maximum of three new sets of tyres (each set consisting of two front and two rear tyres) for the free practices, the qualifying and the races of an event. In addition, a further new front tyre and a further new rear tyre shall be allowed. These tyres may also be allocated during the meeting.

b) No more than six tyres that were allocated to a car at a previous meeting may be nominated for each car for the free practices of a meeting. The bar code numbers of these tyres must be communicated to the Technical Delegate or his representative in writing before the start of the meeting.

At the free practice of the first meeting, each car may be allocated no more than six tyres.

The same shall apply to competitors who are participating in a meeting for the first time in a season or who have changed to another team.

These tyres must be used only in the free practices of the respective meeting.

c) At no time may a car use dry-weather tyres on the track which were not allocated to that particular car and for that particular event.

d) Tyres allocated during an ADAC Formula Masters meeting must not be changed without the Technical Delegate's approval. Such approval shall be given only where tyre damage has been confirmed by the tyre manufacturer as resulting from the tyre manufacturing process.

Wet-weather tyres

a) There are no restrictions on the number of wet-weather tyres used.

b) Wet-weather tyres may only be used during a practice, qualifying or race session if the Race Director has declared the session a wet practice, wet race or wet track.

4.21 Aerodynamic devices

Front and rear wings may be adjusted according to the manufacturer's specifications. Additional boring and the extension of the adjustment range shall be prohibited. Attaching additional flaps and/or "Gurney Flaps" to the wings shall be prohibited.

4.22 Data transmission/electrical system

Battery

There shall be no restrictions on batteries, provided that the original battery mount and the battery's original position in the vehicle are maintained.

Radio

Competitors may not carry any type of radio communication devices in their vehicles throughout a meeting. During pit stops, drivers may communicate with their pit crew using the plug-in wire intercom system, which must have its own power supply outside the competitors' vehicles. No on-board power supply for the intercom shall be allowed.

Telemetry

Telemetry systems (definition pursuant to ISC, Appendix J, Art. 275.1.19) must not be used or carried in competitors' vehicles.

Lap timer

The lap timer is part of the data recording system and shall be used only to record and analyse lap times.

Data logging

Only the original equipment listed below (see ADAC Formula Spare Parts Catalogue) may be used for data logging:

Manufacturer of the data logging unit: AIM; model evo3 pista.

The data logger must be positioned as specified in the ADAC Formula Spare Parts Catalogue.

Sensors/measurement channels: Wheel speed front axle (1 sensor)

Caster angle (1 sensor)
Water temperature (1 sensor)
Oil pressure (1 sensor)
Brake pressure (2 sensors)
Spring travel (3 sensors)
Lap time (1 sensor)
Accelerator/throttle valve position (1 sensor)
Gear (1 sensor)
Revmeter
Battery voltage

At any time during a meeting, the Technical Delegate may read the dynamic vehicle data recorded in the vehicles' data logger.

The diagnostic cable jack should be installed under the cowl with a mount so that it is parallel to the external battery jack and accessible through an opening in the engine cover to allow data reading without removing the cowl.

There shall be no restrictions on the use of the AIM Memory Key. If used for data storage during free or timed practice and races, the AIM Memory Key must be clearly marked with the team's name and starting number and may not be removed from the vehicle before parc fermé rules are lifted.

The cables of any sensors other than those permitted may remain in the vehicles throughout a meeting as long as they are not connected and are properly fastened. Any sensors other than those permitted and their mounts or channel extensions must be removed from the vehicles.

Cable harness

Only Vohl Kabelkonfektion GmbH shall be authorised to repair the cable harness in vehicles.

The use of the cable harness with chafing protection [FD7 971 602-HFT] shall be allowed as well as

the re-fitting of the cable harness [FD7 971 602] with chafing protection by Vohl Kabelkonfektion GmbH.

Cable harnesses showing signs of do-it-yourself repair suggestive of manipulation shall not be allowed.

4.23 Driver equipment

Whilst driving, each driver must always wear his complete driver's equipment in compliance with Appendix L to the ISC, Chapter III, and the prescribed head restraint system and fasten his seat belts. Driving is considered to be any movement of the car under its own engine power.

The use of a Head and Neck Support System (HANS) in compliance with FIA specifications is mandatory. HANS systems must bear a FIA standard 8858-2002 label. The helmet manufacturer must certify helmet-tether anchorage and its installation. HANS-tether anchorage must be marked with "FIA 8858-2002". Only helmets specified for use with HANS by the FIA or DMSB (see blue section of DMSB Yearbook) may be used.

Drivers participating in free or timed practice and races must wear long fire-resistant undergarments, a balaclava hood, socks, overalls, gloves and shoes compliant with FIA Standard 8856-2000.

All undergarments and the balaclava hood must be complete as specified by the manufacturer (e.g. no cutting off or embroidering of the fabric).

Protective clothing specifications and a list of the homologated helmets can be found on the FIA website, www.fia.com.

4.24 Protection against heat

Thermal insulation of any kind may be used on lines and surfaces (e.g. the brake lines, cable harness, engine covers etc.). The use of sheet metal elements which do not fit closely shall be prohibited.

The lambda probe cable and connector must be insulated in a heat-resistant protective tube. The exhaust manifold must be insulated in heat-resistant matting.

4.25 Cooling

The original cooling system hoses may be replaced with other hoses meeting the same thermal and pressure resistance specifications. The set-up of the cooling system may not be modified. For the purpose of thermal regulation, it shall be permitted to mask the radiator vent in the right-side pod. It shall also be permitted to mask the radiators themselves and/or the radiator grilles.

To ensure impeccable cooling system performance, a banjo bolt must be installed on the top of the radiator. A venting line must connect the banjo bolt to a t-adapter on the overflow container.

An approx. 30mm section of the pipe with the part no. F00727B008 may be cut off and replaced with a flexible line.

4.26 Windscreen

The cockpit windscreen must rise 23mm +/-2mm above the monocoque structure measured over the vehicle's longitudinal axis.

Appendix

Figure 1:

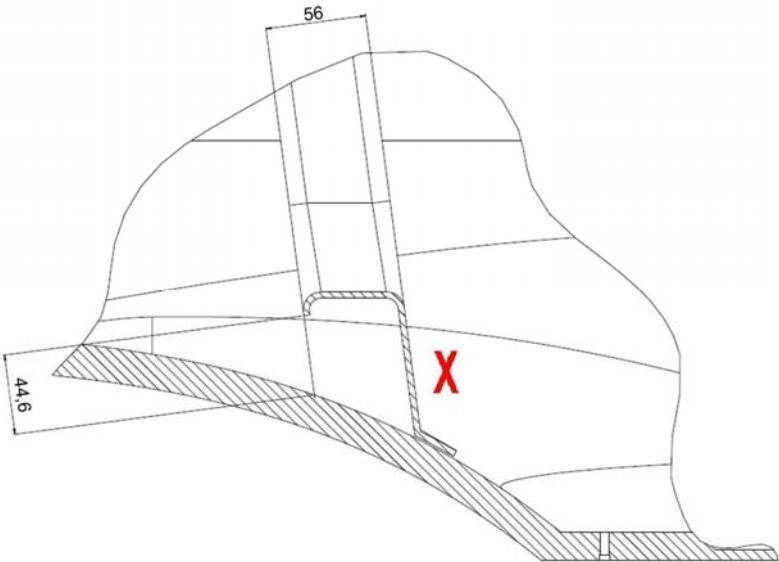


Figure 2:

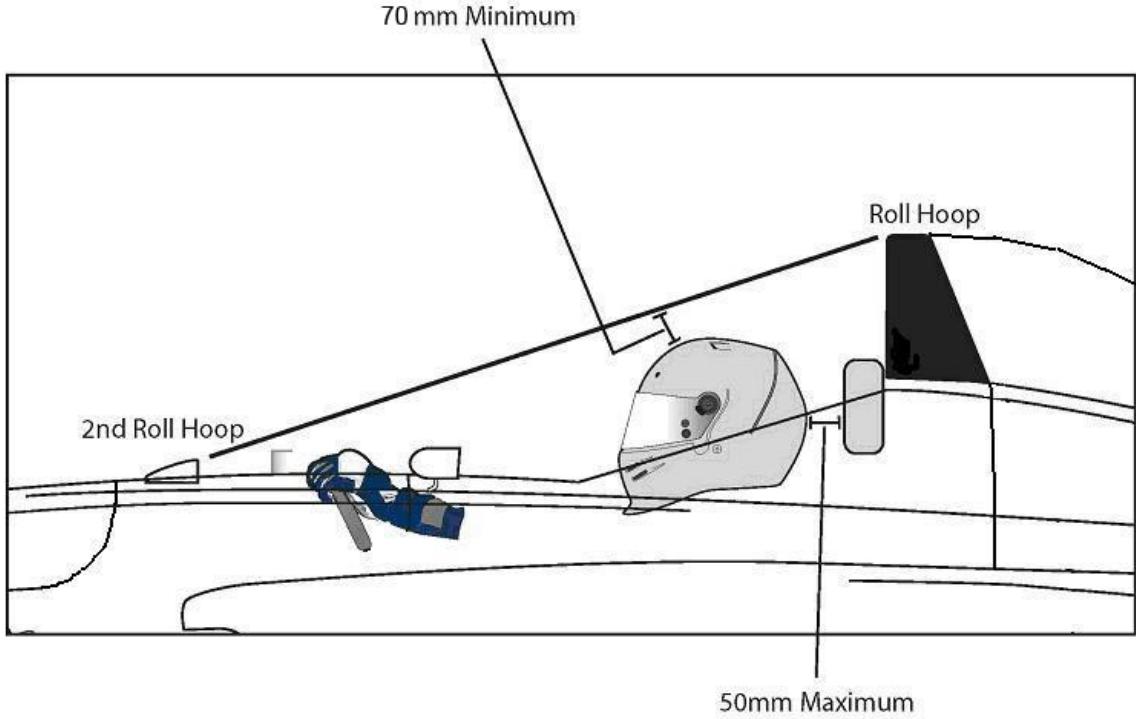


Figure 3:

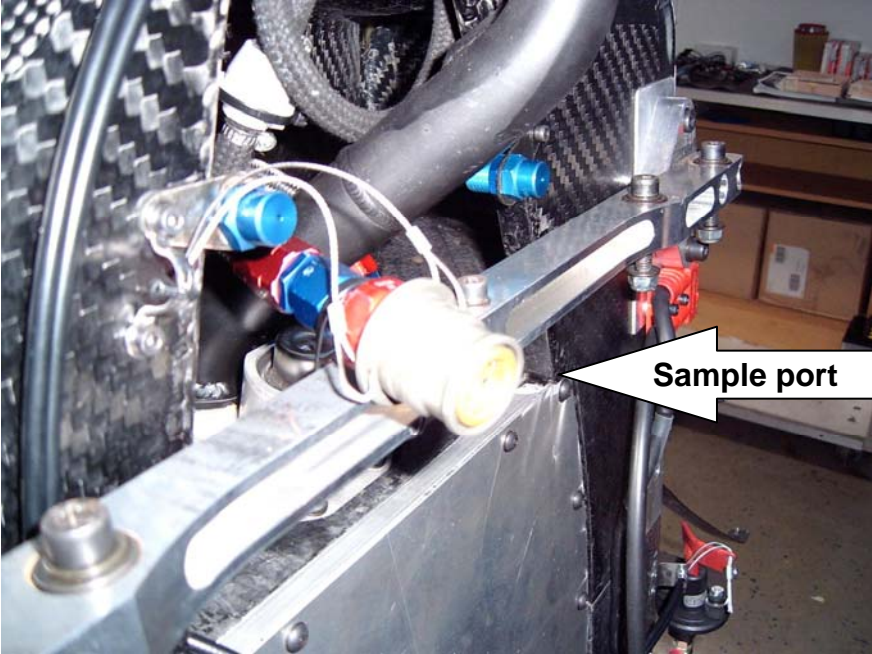


Figure 4:

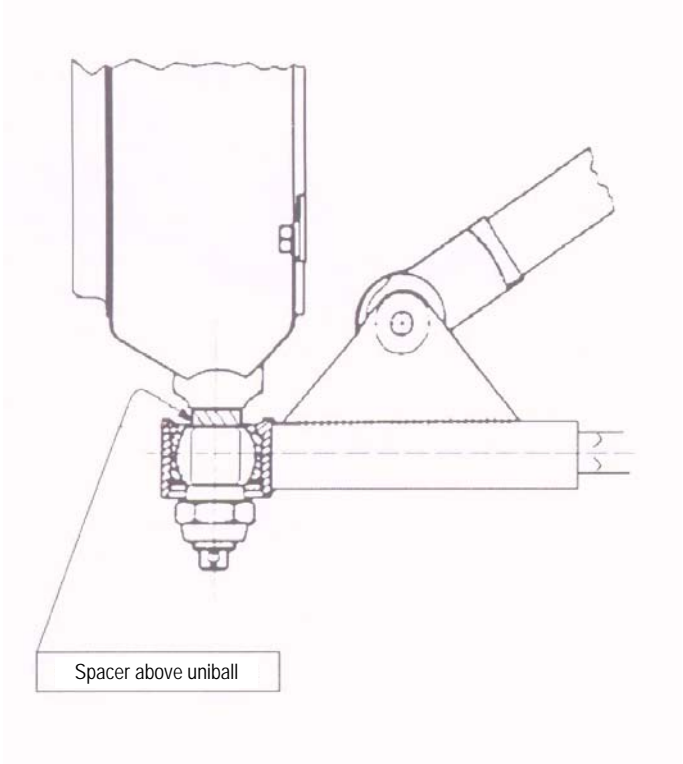


Figure 5:

