



FEDERATION INTERNATIONALE DE L'AUTOMOBILE

Recommended Specification For Extractable Seats In Single Seater And Sports Cars



Version 3 01-10-2005

In order that an injured driver may be immobilised and removed from the car in his seat under medical supervision following an accident, cars shall be fitted with a seat constructed according to the following principles.

1. The seat shall be in the form of a shell in non-metallic fibre composite material, suitable if necessary for receiving a liner formed to the driver, which should be positively located. The seat shall provide him with good lateral support at the hips and shall extend from coccyx to shoulder level (unless there is an integrated headrest as mentioned in 3).
2. The shape and fit of the seat in the cockpit will be such that:
 - no head restraint worn by the driver may be less than 25mm from any structural part of the car when he is seated in his normal driving position;
 - removable shoulder supports can be fitted on either side if necessary.
3. Normally the seat shall be designed with a slot in the back to accept a head stabilisation device which is issued to all extrication crews in the FIA Extrication Bag. The dimensions of this device and slot are given in Figures 1 and 2 respectively.

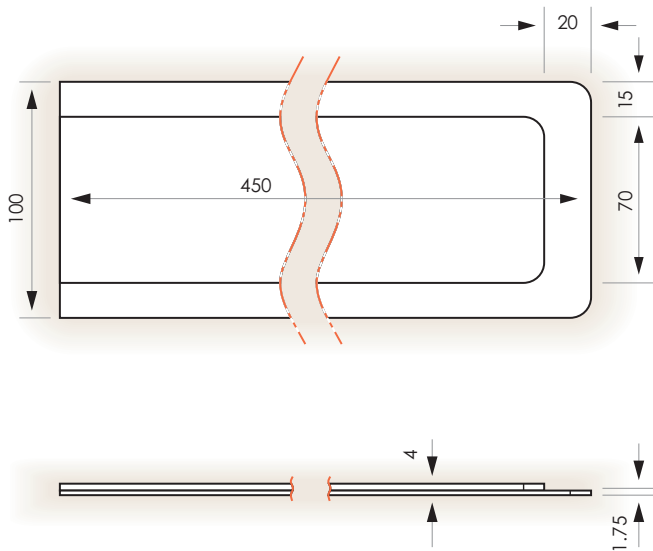


Figure 1: Standard FIA head stabilisation device

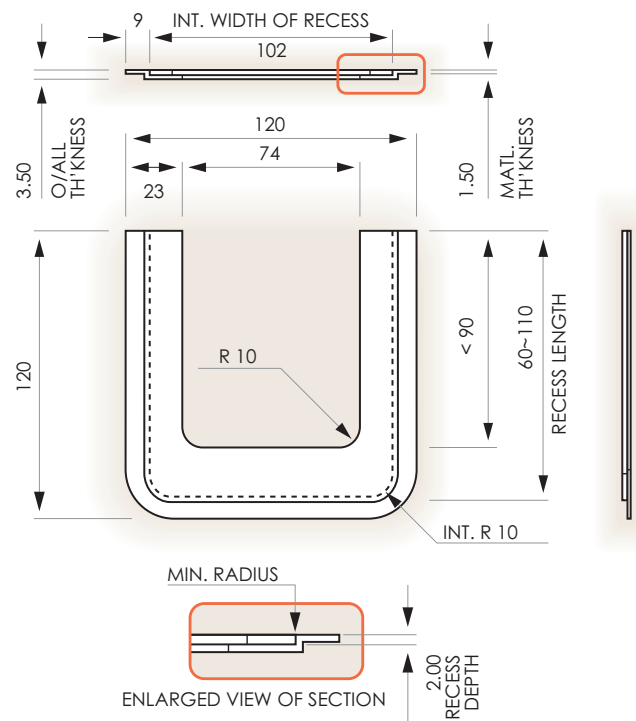


Figure 2: Seat slot for FIA head stabilisation device

An alternative model, used in some existing formula cars, has an integral head support which extends upwards, with a minimum width of 90mm, as far as a horizontal tangent to the top of the driver's head.

4. The seat must be removable without the need to cut any of the seat belts or remove the harness buckle.

The shoulder and lap belts must fall away over the seat edges as it is withdrawn and the crotch straps must pass freely through the seat bottom hole or holes, which must be located in front of the driver's crotch.

Any seat liner must have the same holes as the seat shell, identical and perfectly aligned with them in order to prevent the harness straps being trapped.

However, if the lap straps have to pass through holes in the seat, it is necessary to fit the car with a harness having the buckle attached to a shoulder belt, given that the buckle will not pass between the driver's body and the side of the seat.

5. The seat shall be located in the chassis such that it is firmly fixed horizontally. It is important that the seat shall not be displaced or fractured by lateral or longitudinal accelerations. To achieve this it is recommended to eliminate any voids between seat and chassis.

If it is mechanically secured, this must be done with no more than two bolts. If bolts are used they must:

- be clearly indicated and easily accessible to rescue crews;
- be fitted vertically;
- be removable with a 4mm Allen key, issued to all extrication crews in the FIA Extrication Bag.

6. The seat must be equipped with the following straps and anchorages (see figures 3 and 4) for immobilising the driver and lifting the seat, with the help of the contents of the FIA Bag (see bag contents in Appendix).



Figure 3. Disposition of strap receptacles



Figure 4. Detail of lower straps

- 2 shoulder straps, diagonally crossed from right side of thorax to top left corner (red strap) and from left side of thorax to top right corner (blue strap), attached with plastic adjuster buckles. The female buckle receptacles* at the shoulders are mounted on webbing loops in the corresponding colours, on to which 2 of the black lifting straps from the FIA Bag will also be clipped.

- 1 buckle receptacle* on each side of the seat at hip level, to receive one of the orange immobilising straps from the FIA Bag

- 1 buckle receptacle* on each side at the bottom end of the seat, to receive the other orange immobilising strap from the FIA Bag and mounted on orange webbing loops onto which the other 2 black lifting straps from the FIA Bag will also be clipped.

*See buckle references in Appendix.

The straps shall be:

- in 50mm wide seat belt webbing;
- preferably in the colour corresponding to their function;
- permanently exposed at the edges of the seat so as to be immediately visible and accessible to the extrication teams. The liner shall be trimmed accordingly.

NB: other models and systems may be approved by the FIA on condition that they require no supplementary tools, or rescue team knowledge and training (e.g.: BMW "FORS" system).

7. The FIA training DVD showing the seat in action, as well as any further information, is available on request from the FIA, Geneva.

APPENDIX - CONTENTS OF THE "FIA EXTRICATION BAG"

One bag with FIA logo
One tool - 4mm Allen key
One head stabilisation device in carbon fibre with Velcro on both sides
4 cushions to place between head and headboard as necessary
2 red straps with Velcro for immobilising the head at forehead and chin
2 orange straps with plastic male buckles*, adjustable, for immobilising at hips and thigh
1 black strap with Velcro for tying hands together
1 blue strap with Velcro for tying feet together
4 black straps with snap hooks for lifting the seat out

* BUCKLE maker and references:

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Part n°: 960406-BA-50

Description: ACW CSR2 2" BLACK BUCKLES