FEDERATION INTERNATIONALE DE L'AUTOMOBILE

FIA STANDARD 8855-2021

COMPETITION SEAT

CLARIFICATION NOTE

INTRODUCTION

The aim of this document is to clarify DESIGN REQUIREMENTS AND TEST PROCEDURES of the standard. Every time this document will be updated, it will be shared with Manufacturers and Test House approved for 8855-2021 Seats.

This document is meant to be a clarification and does not modify or replace any content of the FIA Standard 8855-2021.

Article 4.7 – SEAT BRACKET ADJUSTABILITY

"The seat shall be approved with one or more seat brackets in order to allow at least the following adjustments:
i) 120 mm in the longitudinal direction.
ii) 80 mm in the vertical direction.
iii) 15 degrees in pitch. "

In case the seat is homologated with back-bracket the adjustability criteria need to be respected by the back bracket installation either.

Article 4.8. - ALTERNATIVE SEATS BRACKETS TEST PROCEDURE

Hereafter the main options:

- Option 1: the test procedures defined in APPENDICES B and C by Finite Element Analysis (FEA) by a Company Approved by the FIA for the Calculation of Safety Cages and listed in Technical List n° 35.

- Option 2: the test procedure defined in APPENDIX E, either by physical testing at the test house or by Finite Element Analysis (FEA) by a Company Approved by the FIA for the Calculation of Safety Cages and listed in Technical List 35.

- Option 3: homologation test of the original seat with a new set of seat bracket (it is only required to perform the side and real loading tests).

When approving an alternative seat bracket based on Option 1 or Option 3 procedure, the rear loading test is not necessary, if the alternative seat bracket meet the following additional requirements in relation to the reference seat bracket:

a. same type (e.g., L-shaped or blade bracket);
b. same material.
c. thickness is not reduced.

The option "a" requires that the design/shape of the bracket shall be the same, as the reference bracket. Please check with the FIA Safety Department if the new bracket meets these requirements.

FEA ANALYSIS CLARIFICATIONS

For the manufacture who wants to proceed with an option that include FEA Analysis here some clarifications on this process:

i) Information to be provided regarding the analysis:

- Specification of the material used in the simulation (e.g. physical properties, module, tensile strength, etc.)
- Definitions of loads and constrains of the system (graphical scheme)
- Comparation of the stresses and overall deflection of the proposed design with the original design.

ii) Clarification on the process:

- Seat Shell can be modelled as a simplified structure as far as the application point of the loads and the contact surface with the brackets are aligned with the reality. The seat can be considered infinitively rigid.
- The stress criterion adopted shall be the Von Mises Criterion.
- The simulation shall be performed in the worst-case adjustment position.
- The Report shall include the peak stress and its location.

iii) Pass/Fail main criteria:

- The deflection in all the points of the bracket shall be ≤ of the reference case (Simulation performed with the original seat brackets).

STANDARD IMPLEMENTATION IMPORTANT DATES

15 December 2020:
- Publication of the FIA Standard.
- Start of tests and approval process for seats 8855-2021.

1 January 2021:
- Publication of the Technical List with 8855-2021 approved seats
- Start the sale of 8855-2021 stickers.
- FIA 8855-2021 seats become effective (Appendix J & K will be updated)

31 December 2022
- Deadline to approve new 8855-1999 Seats, only Re-homologation will be accepted.

31 December 2028:
- 8855-1991 not accepted in modern cars anymore (removed from Appendix J)

LIST OF AMENDMENTS

New text: **thus**
Deleted text: ~~thus~~
Comments: *thus*

Date	Modifications
08.06.2022	Article 4.7, Article 4.8, Standard Implementation Important Dates
XX.YY.ZZZZ	Article X.Y