

Informal document No. 8

(28th GRSP, 27 November - 1 December, agenda item 2.5.)

DRAFT

A United Kingdom proposal for amending

Regulation No. 29

List of contents, regulations and annexes amend to read:

Annex 3. Test procedure for rear wall strength.

Annex 4. Procedure for positioning of the manikin

1. 1.0 Scope
Insert after carriage of goods "the maximum authorised mass of which exceeds 7 tonnes".
2. 3.2 Insert after 'drawings of the vehicle' the words, "or vehicles, "
3. 4.2 Change 02 (referring to the 02 series of amendments) to "03" (two occurrences)
4. 5.3.1 Delete the existing text and replace with new 5.3.1 to 5.3.1.2:
5.3.1 - "After undergoing each of the tests referred to in paragraph 5.2 above the survival space occupied by the manikin shall:"
5. 5.3.1.1 - not have been intruded
6. 5.3.1.2 - not exhibit evidence of contact between the manikin and any non-resilient parts.
7. 5.3.1.3 Displacement of the limbs of the dummy is acceptable provided that the displacement is unlikely to have resulted in a fracture or other significant injury.
8. 5.3.2 Delete the existing text and replace with " Test A, B and C shall be carried for every seat provided by the manufacturer except that; any test need not be repeated for any seat that, when in its lowest and most rearward position, would not cause the manikin to be higher or further forward than at the time of test."
9. 5.4.1 Delete " or broken"
10. 5.5. Delete "Tests B and " and insert "Test". Also delete "roof or"
11. 10.1 Delete "02" and insert "03" (two occurrences).
12. 10.2 Delete "02" and insert "03". Delete " 1 October 2002" [date to be inserted]
13. 10.3 Delete "02" and insert "03". Delete " October 2006" [date to be inserted].

ANNEX 2

14. Model A Delete 02 and replace with 03 (three occurrences)
15. Model B Delete 02 and replace with 03 (three occurrences)

ANNEX 3

16. 2. Insert the words " corresponding to the engine of smallest overall dimensions normally installed in vehicles that the cab being tested is used with," between "...dimensions, and mounting," and " shall be fitted"
17. 3 Delete "For test A, the cab shall be mounted on a vehicle. For tests B and C, the" and insert "The"
18. 4.1.1 Amend to read "The swing-bob shall be made of steel and its mass shall be evenly distributed; its mass shall be 1,500+ 250 kg.. It shall be of cylindrical construction 1000 ± 10mm in length and 600 ± 10mm in diameter Its edges shall be rounded to a radius of curvature of not less than 1.5 mm."
19. 4.1.2 Amend to read: "The swing-bob assembly shall be of essentially rigid construction. The swing-bob shall be freely suspended by two chains. The chains shall be not less than 3500 mm long from the axis of suspension and the geometric centre of the bob.
20. 4.1.3.2 Replace existing text with: "The longitudinal axis of the swing-bob shall lie in the transverse plane of the cab."
21. 4.1.3.3 Delete "median" and replace "vehicle" with "cab"
22. 4.1.4 Delete "3,000 mkgf for vehicles of a permissible maximum mass up to 7,000 kg and 4,500 mkgf for vehicles for which the permissible maximum mass exceeds this value" and insert " 40kJ."
23. Create new 4.1.5. to 4.1.5.3.1. as follows:
24. 4.1.5. to The foremost edge of the swing-bob shall strike the cab at a median point between (see figure 2):
25. 4.1.5.1. A horizontal plane level with the lowest part of the underside of the drivers floor between:
26. 4.1.5.2. A transverse plane passing through the centre of the most forward seat mounting point and a transverse plane passing through the centre of the pivot of the service brake pedal and:
27. 4.1.5.3 A horizontal plane level with the lowest part of the lower edge of the windscreen aperture.

28. 4.1.5.3.1 If the windscreen is stepped this shall be the longest edge or if an equal split the upper edge. See figure 3a and 3b
29. 4.1.6. Create a new 4.1.6 as follows:"The outermost edge of the swing-bob shall be between two parallel vertical planes 30mm apart, the inner one of which is parallel to the mean longitudinal plane and tangential to the outermost part of the drivers door not including any fitted projections such as, but not limited to, door handles, mirrors and trim. See figure 4."
30. 5. Delete existing 5. And replace with 5. To 5.4 as follows:
31. 5. Roof Strength (test B)
32. 5.1 The cab shall be tilted to an angle of 25 degrees about its longitudinal axis so that the drivers side is uppermost.
33. 5.2 The roof of the cab shall withstand a static load of 2.7 x the unladen weight of the front axle, or axles, of any vehicle to which it may be fitted, subject to a maximum load of 10 tonnes.
34. 5.3 The load shall be applied by a suitably shaped rigid platen the underside of which shall be evenly and uniformly covered in grease.
35. 5.4 As an alternative to 5.1 the cab may remain level and the test equipment tilted provided the effect is the same.

Annex 3 - Appendix 1

36. In the title delete" TO THE TEST BED" and replace with " AND CABS"
37. Re-number 1 to 3.2 as 2 to 4.2 and insert a new 1 as follows:
38. 1 Anchorage of the cab
39. The cab shall be mounted on the vehicle or frame using only the cabs normal mountings, mounting points and fasteners. This may include any cab locking device or any other component fitted as standard between the cab and the vehicle chassis at the manufacturers request.
40. 2.6. (the previous 1.6.) amend to read "At the request of the manufacturer the test may be carried out with the cab mounted on a special frame, on condition that this method of mounting is shown to be equivalent to mounting on the vehicle and complies with paragraph 1 of this Appendix."
41. Insert after figure 1 three new figures. Figures 2 ,3 and 4
42. Annex 3 Appendix 2
43. Change "fiftieth" to "ninety five"

44. Change dimensions as follows:

AA	Breadth of head	15.8	Cm
AB	Combined height of head and neck	28.6	"
D	Distance from top of head to shoulder pivot	36.3	"
E	Calf depth	12.3	"
F	Height from seat to top of shoulder	63.6	"
J	Height of elbow rest	26.9	"
M	Knee height	65.0	"
O	Chest depth	29.2	"
P	Distance from seat back to knee	63.5	"
R	Distance from elbow to fingertip	51.6	"
S	Length of foot	37.1	"
T	Length of head	21.4	"
U	Height from seat to top of head	96.7	"
V	Shoulder breadth	49.7	"
W	Breadth of foot	12.2	"
a	Distance between hip point centres	21.6	"
b	Chest breadth	33.9	"
c	Height of head and chin	22.9	"
d	Forearm thickness	10.4	"
e	Distance between vertical centreline of torso and rear of head	12.2	"
f	Distance between shoulder pivot and elbow pivot	28.5	"
g	Knee pivot, height from ground	56.6	"
h	Thigh breadth	18.7	"
i	Lap height (sitting)	66.7	"
j	Distance from top of head to 'H' point	86.9	"
k	Distance between hip pivot and knee pivot	44.0	"
m	Ankle pivot, height from ground	10.7	"

45. Delete Annex 4 and replace with new Annex 4

46.

ANNEX 4 (new)

Annex 4

Procedure for positioning of the manikin

47. 1. Seating position

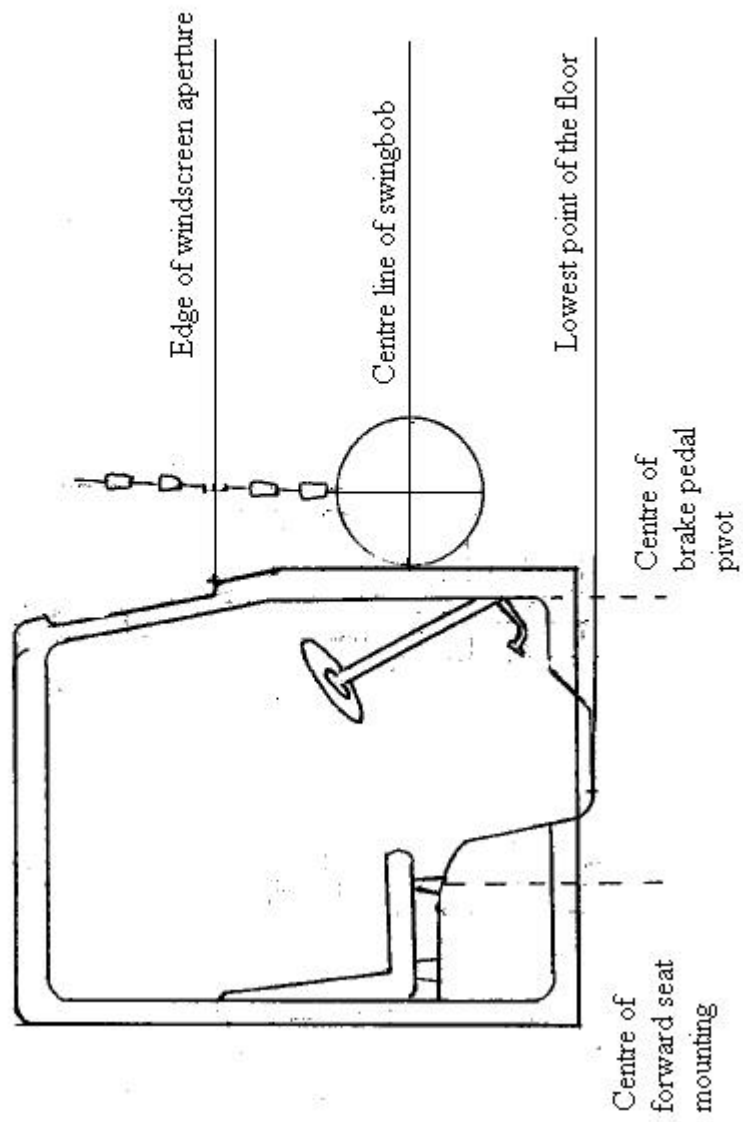
48. 1.1. The seat, if adjustable, shall be adjusted so that it is:

49. 1.1.1. In its lowest position

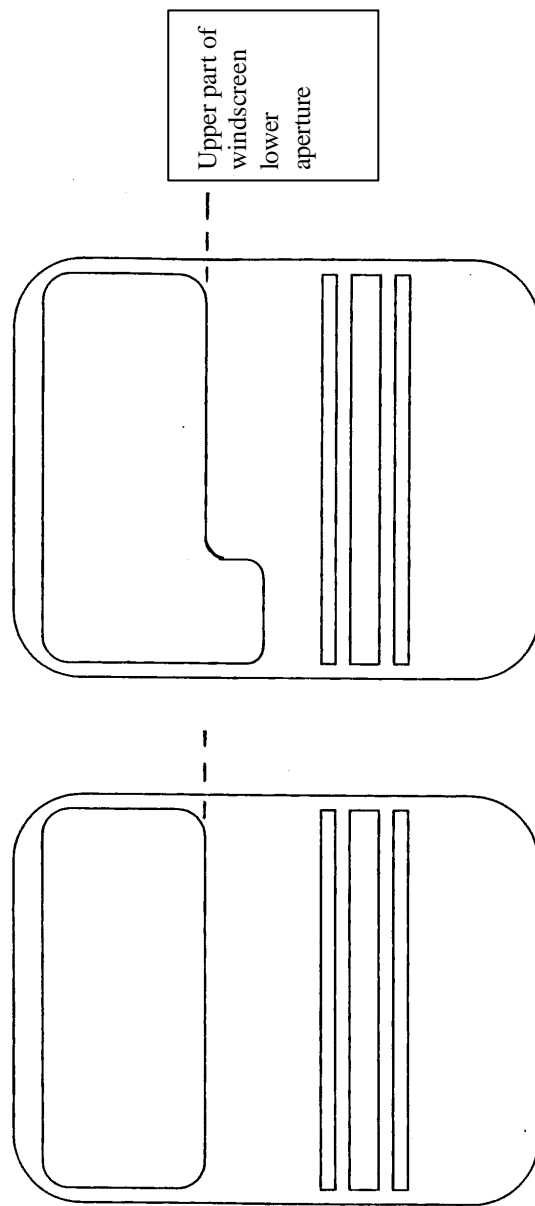
50. 1.1.2. Is as close as possible to, but not exceeding, a point in the horizontal plane 100mm forward of its rearmost position.

51. 1.1.3 In all circumstances when considering any seat adjustment it is only the limit of adjustment for normal driving or riding positions that should be considered and should not include adjustment provided for any other purpose.
52. 1.2 suspension seats
53. the vertical position shall be rigidly fixed corresponding to a normal driving position as specified by the manufacturer commensurate with the size and mass of the manikin used.
54. 2 Steering wheel position
55. 2.1 The steering wheel, if it is adjustable, in any plane or arc, shall be adjusted to its highest and most forward position
56. 2.2 In all circumstances when considering steering wheel adjustment it is only the limit of adjustment for normal driving that should be considered and should not include adjustment provided for any other purpose.
57. 3 Positioning of the manikin
58. 3.1 A manikin of the same dimensions and overall mass, as a 95 percentile male dummy shall be positioned in the drivers seat in the following manner:
59. 3.1.1 Centrally on the seat as far back as is possible in a normal sitting position and so the centre plane of the seat and of the manikin lie in the same vertical plane.
60. 3.1.2 So that centre plane of the manikin is vertical. This shall be achieved by adjusting the seat back or by the use suitable padding between the seat and the manikin or a combination of both.
61. 3.1.4 The manikin shall maintain an upright posture
62. 3.1.5 The torso shall be securely fastened to the seat back with suitable sticky tape.
63. 3.1.6 The feet of the manikin shall be positioned flat on the floor between the operating pedals in as natural position as possible. and taped in place.
64. 3.1.7 The feet and legs shall, as far as is practicable, be kept parallel to each other.
65. 3.1.8 The hands of the manikin shall be placed on the steering wheel at the ten-to-two position and taped in place.
66. 3.1.9 The hands and arms shall, as far as is practicable, be kept parallel with each other.

Annex 1 Appendix 3
Figure 2



Annex 1 - Appendix 3
Figure 3



Annex 1 - Appendix 3
Figure 4

