

## SCHEDULE 4

### Technical and Administrative Requirements for Grant of National Small Series Type Approval

## PART 2

### Requirements for Vehicles of Category M<sub>1</sub>

## SECTION 2

### Part A

#### 1. Wheelchair spaces

1. A wheelchair space must be fitted with—
  - (a) a wheelchair and wheelchair user restraint system complying with item 19 of Directive [2007/46/EC](#), Annex XI, Appendix 3; or
  - (b) a restraint system comprising—
    - (i) a four point wheelchair tie-down system suitable for general wheelchair application; and
    - (ii) a wheelchair user restraint system comprising a minimum of three anchorage points to provide a pelvic and upper torso restraint system.

#### 2. Wheelchair tie-down devices

2. A wheelchair tie-down device must comply with ISO 10542 and be marked accordingly.

#### 3. Location and geometry of anchorages

3. The geometry of the wheelchair tie-down and occupant restraint system anchorages and webbing must comply with ISO 10542. A surrogate wheelchair as defined in ISO 10542 or equivalent must be used for this purpose.

#### 4. Testing of restraint system anchorages

4. A static test must be conducted on the anchorage points for both the wheelchair tie-downs and occupant restraints in accordance with the following requirements—
  - (c) The tests must be conducted on a vehicle or a representative section of a vehicle structure including any vehicle fittings that are likely to contribute to the strength or rigidity of the structure;
  - (d) The forces specified in 5 below must be applied by means of a surrogate wheelchair of adequate strength as defined in ISO 10542, or equivalent, with attachment points for the front and rear tie-downs and reproducing the geometry of the wheelchair tie-down system;
  - (e) The forces specified in 6 below must be applied by means of a traction device specified in paragraph 5.3.4 of Annex I to Directive [76/115/EEC](#) as last amended by Directive [96/38/EC](#) and supported on the surrogate wheelchair defined in (b) above;
  - (f) The forces in (b) and (c) above must be applied simultaneously in the forward direction at an angle of  $10^\circ \pm 5^\circ$  above the horizontal plane. The force in (b) shall be applied at a height of not less than 200 mm and not more than 300 mm measured vertically above the floor of the wheelchair space;

- (g) The force in 5(b) must be applied in the rearward direction at an angle of  $10^{\circ} \pm 5^{\circ}$  above the horizontal plane at a height of not less than 200 mm and not more than 300 mm measured vertically above the floor of the wheelchair space;
- (h) All forces must be applied as rapidly as possible through the central vertical axis of the wheelchair and wheelchair space; and
- (i) All forces must be maintained for a period of not less than 0.2 seconds.

For test purposes the components comprising the wheelchair tie-down and occupant restraint devices may be replaced with components suitable for test purposes having a similar function.

#### **5. Forces applied to a wheelchair tie-down system**

- 5. The force applied to the surrogate wheelchair:
  - (j) in the forward direction to be 24.50 kN;
  - (k) in the rearward direction to be 12.25 kN.

#### **6. Forces applied to an occupant restraint system**

6. The forces to be those specified in paragraph 5.4 of Annex I to Directive [76/115/EEC](#) as amended by Directive [96/38/EC](#).

#### **7. Anchorage system performance**

- 7. The anchorages will meet the test performance requirements if—
  - (l) no part of the system has failed, or become detached during the test;
  - (m) no part of the anchorage system has deformed to such an extent that sharp edges or protrusion may cause injury.