ANNEX III

PART 2

Tests on spray-suppression devices of the energy-absorber type

1. PRINCIPLE

The aim of this test is to quantify the ability of a device to retain the water directed against it by a series of jets. The test assembly is intended to reproduce the conditions under which the device is to function when fitted to a vehicle as regards the volume and speed of the water thrown up from the ground by the tyre tread.

2. EQUIPMENT

See Figure 8 in Annex VI for a description of the test assembly.

3. TEST CONDITIONS

3.1. The tests must be carried out in a closed room with a still-air environment.

3.2. The ambient temperature and the temperature of the test pieces must be 21 (± 3) °C.

3.3. De-ionised water is to be used.

3.4. The test pieces must be prepared for each test by wetting.

4. PROCEDURE

4.1. Secure a 500 (+ 0/– 5) mm wide 750 mm high sample of the equipment to be tested to the vertical plate of the testing equipment, making sure that the sample lies well within the limits of the collector, and that no obstacle is able to deflect the water, either before or after its impact.

4.2. Set the water flow rate at 0,675 (+/– 0,01) l/s and direct at least 90 l, at most 120 l on to the sample from a horizontal distance of 500 (+/– 2) mm (Figure 8 of Annex VI).

4.3. Allow the water to trickle from the sample into the collector. Calculate the percentage of water collected versus the quantity of water sprayed.

4.4. Carry out the test five times on the sample according to points 4.2 and 4.3. Calculate the average percentage of the series of five tests.

5. RESULTS

5.1. The average percentage calculated in point 4.4 must be 70 % or higher.

5.2. If within a series of five tests the highest and lowest percentages of water collected depart from the average percentage by more than 5 %, the series of five tests must be repeated.

If within a second series of five tests the highest and lowest percentages of water recovered again depart from the average percentage by more than 5 % and if the lower value does not satisfy the requirements of point 5.1, type-approval shall be refused.

5.3. Test whether the vertical position of the device influences the results obtained. If it is the case, the procedure described in points 4.1 to 4.4 must be repeated in the positions

giving the highest and lowest percentage of water collected; the requirements of point 5.2 remain in force.

The mean of the individual results shall then be taken to give the average percentage. This average percentage must be 70 or higher.