

Paragraph 5.1.3, add at the end the following text:

5.1.3. Secondary brake system control operation:

Vehicles shall have configurations that enable a rider to operate the secondary brake system control whilst seated in the normal driving position and with at least one hand on the steering control. **It must be possible to graduate the braking action by easily regulating the braking force with sufficient precision.**

Comment “Visibility”

An essential characteristic of a braking system is that its warnings are visible to the driver under all driving conditions.

Add new paragraph 5.1.13 as follows:

5.1.13. The warning signals shall be visible, even by daylight; the satisfactory condition of the signals shall be easily verifiable by the driver from the driver's seat.

Comment “Single failure”

Any single failure on a braking system which reduces the braking performance of the motor cycles should be such that a certain minimum performance is ensured. Thus, a **general** requirement is added to cover all **possible** mechanical, hydraulic and electrical failures which may not be covered by the specific “failure requirements” of Annex 3.

Add new paragraph 5.3.4 as follows:

5.3.4. In the case of any single failure on a braking system and when the brakes are tested in accordance with the test procedure set out in paragraphs 3.1 and 3.2 of Annex 3 the brake performance shall be at least:

- stopping distance $S \leq 0.0154 V^2$ or
- MFDD $\geq 2,5 \text{ m/s}^2$

This minimum performance requirement does not apply for the specified failure conditions/tests covered by Annex 3.

the documentation shall be supported, by an analysis which shows, in overall terms, how the system will behave on the occurrence of faults which will have a bearing on vehicle control performance or safety.

Comment “Fully cycling”

On a high friction surface ABS cycling may not be attainable for certain motor bikes even if the control forces may be increased.

Paragraphs 9.3.1 (d) 9.5.1 (e) 9.6.1 (e) and 9.7.1 (e), amend to read:

9.3.1 (d) Brake actuation force:

Hand control: = 200 N \pm 20 per cent

Foot control: = 350 N \pm 20 per cent

These forces may be increased in order to ensure that the ABS is fully cycling during the stop.

If the increase of the actuation forces does not ensure that the anti lock system is fully cycling then this test may be carried out on a surface with a PBC of less than 0.8.

For systems where the brake actuation force fluctuates due to ABS operation, the nominal brake actuation force is the mean value applied for the duration of the stop.

9.5.1., 9.6.1. and 9.7.1

(e) Brake actuation force:

Hand control: = 200 N \pm 20 per cent

Foot control: = 350 N \pm 20 per cent

These forces may be increased in order to ensure that the ABS is fully cycling during the stop.

If the increase of the actuation forces does not ensure that the anti lock system is fully cycling then this test may be carried out on a surface with a PBC of less than 0.8.

For systems where the brake actuation force fluctuates due to ABS operation, the nominal brake actuation force is the mean value applied for the duration of the stop.

