

Proposal for a new Supplement to the 04 series of amendments to UN Regulation No. 78

Submitted by the expert from the International Motorcycle Manufacturers Association (IMMA)

The amendments to the text are in bold for new text and in strikethrough for deleted text.

I. Proposal

Insert a new paragraph 2.31., to read:

"2.31. **"Disable the antilock brake system" means to put the system into a state where it will no longer fulfil the technical requirements in paragraph 9 of Annex 3 to this Regulation.**"

Paragraph 5.1.15., amend to read:

"5.1.15. ~~When~~**If** a vehicle is equipped with the means to indicate emergency braking, activation and de-activation of the emergency braking signal shall only be generated by the application of ~~the any~~ service braking system when the ~~following~~ conditions **in paragraphs 5.1.15.1. through 5.1.15.2.** are fulfilled:³"

Paragraph 5.1.15.2., amend to read:

"5.1.15.2. ~~The following conditions may also be used:~~

(a) ~~The signal may be generated from a prediction of the vehicle deceleration resulting from the braking demand respecting the activation and de-activation thresholds defined in paragraph 5.1.15.1. above; or~~

(b) The signal may be activated at a speed above 50 km/h when the antilock system is fully cycling (as defined in paragraph 9.1. of Annex 3) and deceleration is at least 2.5m/s². ~~The deceleration may be generated from the prediction described in point (a).~~ The signal shall be deactivated when the antilock system is no longer fully cycling."

Insert a new paragraph 5.1.15.3., to read:

"5.1.15.3. **The signal may be generated from a prediction of the vehicle deceleration resulting from the braking demand respecting the activation and de-activation thresholds defined in paragraph 5.1.15.1. above.**"

Paragraph 5.1.16., amend to read:

"5.1.16. A means to disable the antilock brake system is not permitted.

By derogation, ~~vehicles which are suitable for off road driving and~~ **a means to disable the antilock brake system is allowed, if vehicles are** fitted with a riding mode selector allowing an "off-road" or "all terrain" mode ~~may be fitted with a single means (e.g. switch, lever, button, menu option) to disable the antilock brake system function, which is only permitted under~~ **and** the following provisions **are met:**

(a) The vehicle is stationary; and

(b) The disablement of the antilock brake system function shall be the result of a deliberate action by the rider according to one of the following methods:

³ At the time of type approval, compliance with this requirement shall be confirmed by the vehicle manufacturer.

- (i) Simultaneous actuation of the antilock brake system ~~on/off~~ **disable**-switch and ~~the front, rear or combined brake system actuator~~ **a service brake system control** (i.e. brake lever or pedal); or
 - (ii) The actuation of the antilock brake system ~~on/off~~ **disable**-switch for a minimum of two seconds; or
 - (iii) The progression through at least two successive steps or levels of actuation of a **control** (e.g. rotating knob, a touch panel switch or a menu option selector);
- (c) Disabling of the antilock brake system function shall only be allowed when the riding mode selector is in the "off-road" or "all terrain" mode; and
- (d) The antilock brake system function shall be automatically enabled ~~after each start up of the vehicle, except for restarts after unintentional stalling of the engine~~ **when exiting from the "off-road" or "all-terrain" ride mode, or after each start-up of the vehicle**; and
- (e) ~~The disablement of~~ **When disabled**, the antilock brake system function shall be indicated by the activation of ~~symbol B.18 as specified in ISO 2575:2010 (ISO 7000 2623) or any other equivalent unequivocal indication of the disabled antilock brake system state. Alternatively, the warning lamp referred to in paragraph 5.1.13. shall be continuously activated (i.e. lit or flashing); and a yellow or amber tell-tale according to one of the following methods until the ABS is fully functional or operating again:~~

- (i) The following symbol as specified in B.18 in ISO 2575:2010:



Or

- (ii) The following symbol as specified in B.05 of ISO 2575:2010:



With the word "OFF" as follows, according to Y.01 in ISO 2575:2010, whereby the tell tales are adjacent to each other:



Or;

- (iii) The text "ABS OFF", or "ABS not available", or,
 - (iv) The warning lamp referred to in paragraph 5.1.13., continuously activated (i.e. lit or flashing).
- (gf) ~~Instantaneous re-enablement~~ **Enabling** of a functional stage which complies with anti-lock brake system approval requirements of the antilock brake system under all operation modes shall be warranted and shall be demonstrated to the satisfaction of the Type Approval Authority in paragraph 9 of Annex 3. shall be possible through the

single actuation of a control (e.g. simple press of a button or switch) **initiating ABS system start-up procedure; and**

- (fg) Prohibition of any software and/or hardware defeat device compromising or allowing to circumnavigate one or more of the requirements set out in points (a) to (ef)."

Insert a new paragraph 5.1.17., to read:

"5.1.17. A vehicle fitted with an ABS system active on both axles may be fitted with a rider selectable mode to deactivate the ABS function on the rear axle. When the ABS function is deactivated on the rear axle this shall be indicated by a yellow or amber tell-tale or check control messages* according to one of the following methods until the ABS is fully functional or operating on both axles again:

- (i) The following symbol as specified in B.18 in ISO 2575:2010:



With the word "REAR" adjacent to it; or

- (ii) The following symbol as specified in B.18 in ISO 2575:2010:



with a symbol of the vehicle adjacent to it with an arrow pointing to the rear axle; or

- (iii) The following symbol as specified in B.05 of ISO 2575:2010:



With the word "REAR OFF" adjacent to it; or

- (iv) The text " REAR ABS OFF", or " REAR ABS not available"; or
- (v) The warning lamp referred to in paragraph 5.1.13., continuously flashing. If the disablement of the ABS system is also indicated by a flashing of this warning lamp as specified in 5.1.16 e-iv, the frequency of the flashing for indicating the deactivation of the ABS system on one axle shall be different from the frequency of flashing to indicate the disablement of the ABS system.

*** Pop up messages in the instrument panel**

Annex 3, paragraph 9.1., amend to read:

"9.1. General:

- (a) The tests are only applicable to the ABS if fitted **and enabled**;

...

- (e) **Vehicles with driver selectable ABS modes (e.g. a dual channel ABS system whereby the ABS on the rear axle can be disabled) shall comply with the technical requirements of this paragraph in all modes where ABS is enabled."**

II. Justification

1. In line with the formal proposal for amendment of UN GTR No. 3 submitted by the expert of Italy (ECE/TRANS/WP.29/GRVA/2019/23), aimed at harmonising the requirements of UN GTR No. 3 with the 04 series of amendments of UN Regulation No. 78, the objective of this proposal is to ensure consistency of UN Regulation No. 78 with proposed amendment to UN GTR No. 3, by minimising the differences in the language without modifying the current requirements.
2. Paragraph 5.1.17 aims to clarify with an explicit article that the rider is duly informed when activating a riding mode that disables the ABS on the rear axle.