

## **Proposal to amend the document ECE/TRANS/WP29/GRRF/2012/19 to consider comments made during the Working Party on Noise on its fifty-sixth session (Geneva, 3-5 September 2012)**

### **I. Proposal**

*Annex 7, paragraph 4.7.2.1., amend to read:*

"4.7.2.1. ...

- (c) ~~Blocking differential~~ **Differential lock** on driven axle is recommended as increasing repeatability;
- (d) A standard commercial system controlling/limiting the slip of the driving axle when accelerating (called Traction Control, ASR, TCS, etc.)."

*Annex 7, paragraph 4.7.2.1.1., amend to read:*

"4.7.2.1.1. In the particular case where it is not possible to find a standard commercial vehicle equipped with a traction control system, a vehicle without Traction Control/ASR/TCS is allowed with a mandatory display of the percentage slip as stated in paragraph 4.3.4. and a ~~recommended~~ **mandatory blocking differential lock** on the driven axle **if the vehicle is equipped with a differential lock** to put in practice the operating procedure 4.7.5.2.1. If the ~~blocking differential lock~~ is not ~~used~~ **available**, the average slip ratio should be measured on the left and right driven wheel."

*Annex 7, paragraph 4.7.5.1., amend to read:*

"4.7.5.1. Mount first the set of reference tyres on the vehicle and when on the testing area.

Drive the vehicle at a constant speed between 4 km/h and 11 km/h and the gear ratio capable of covering the speed range of at least 19 km/h for the complete test programme (e.g. R-T1-T2-T3-R).

~~The Recommended Gear ratio selected in~~ **is 3rd or 4th and shall** ~~should~~ give a minimum 10 per cent average slip ratio in the measured range of speed."

*Annex 7, paragraph 4.7.5.2.1., amend to read:*

"4.7.5.2.1. In the particular case 4.7.2.1.1 where it is not possible to find a standard commercial vehicle having the Traction Control system, the driver maintains manually the averaged slip ratio range for each test run from 10 per cent to 40 per cent (Controlled Slip procedure in place of the Full Slip) in the same range of speeds. If the ~~blocking differential lock~~ is not ~~used~~ **available**, the averaged slip ratio difference between the left and right driven wheel shall not be higher than 8 per cent for each run. All the tyres and runs in the test session are performed with Controlled Slip procedure."

### **II. Justification**

1. Annex 7, paragraph 4.7.2.1(c), 4.7.2.1.1 and 4.7.5.2.1: Correction of wording: "differential lock" in place of "blocking differential"
2. Annex 7, paragraph 4.7.2.1.1.: It is proposed to replace the word "recommended" by "mandatory", because in case of the use of a vehicle w/o ASR but with a differential lock the tyre slip range is easier to control (ensuring slip limits) for left and right wheel than manually. Repeats of invalid test runs can be avoided.

In general the use of an available differential lock will “increase” the repeatability that means it would be easier to perform the test within the variation limits. Otherwise it could lead to more test runs.

3. Annex 7, paragraph 4.7.2.1.1. and 4.7.5.2.1.: It is proposed to change the word “used” by “available”, because that underlines the necessity to use the differential lock if it is available (no alternative).
4. Annex 7, paragraph 4.7.5.1.: It is proposed to replace the word “should” by “shall” to ensure the selected gear ratio fulfil the required minimum slip ratio.

-----