



Additional prescriptions to regulation UN 117

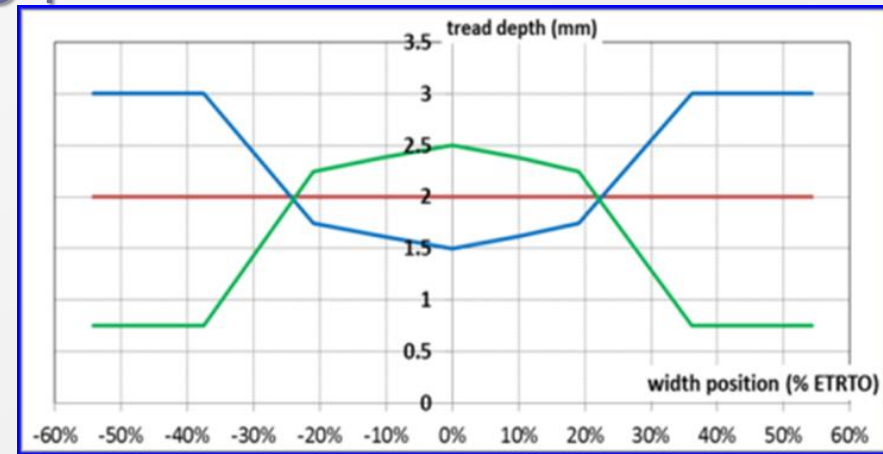
worn tyre for wet-grip performances



Impact of the Buffing profiles

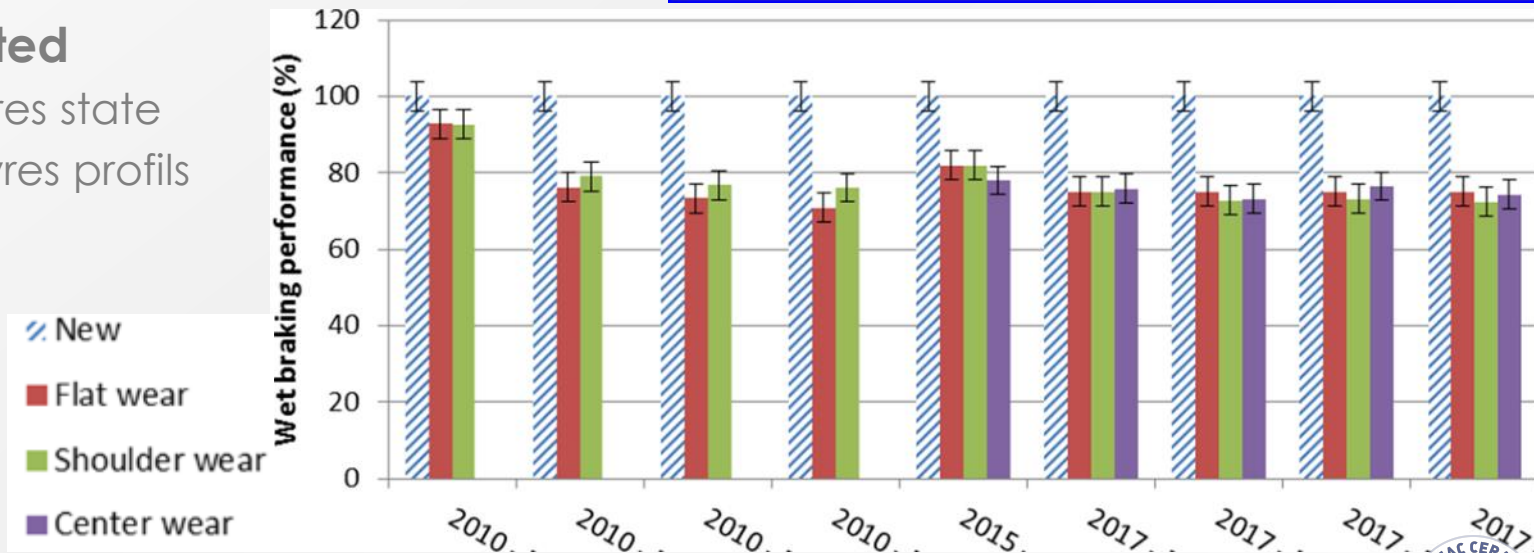
3 different tread pattern Buffing profiles

- ⇒ flat buffing
- ⇒ center buffing
- ⇒ shoulder buffing



9 tyres tested

- ⇒ New tyres state
- VS wear tyres profiles



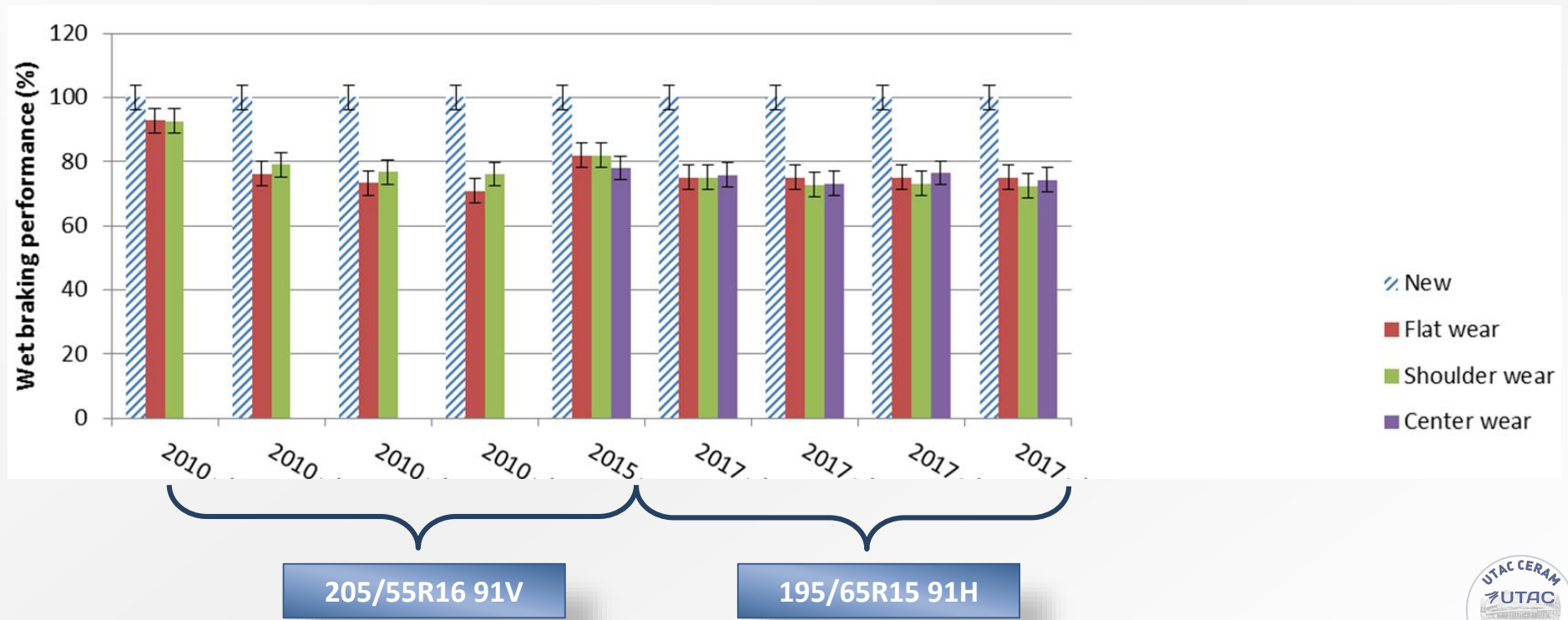
The buffed tyre performance is very close despite the 3 buffing profiles.

The Effect of the end-of-life profil is insignificant on wet braking. (@ same volumetric notch rate)

●●● Impact of the Buffing profiles

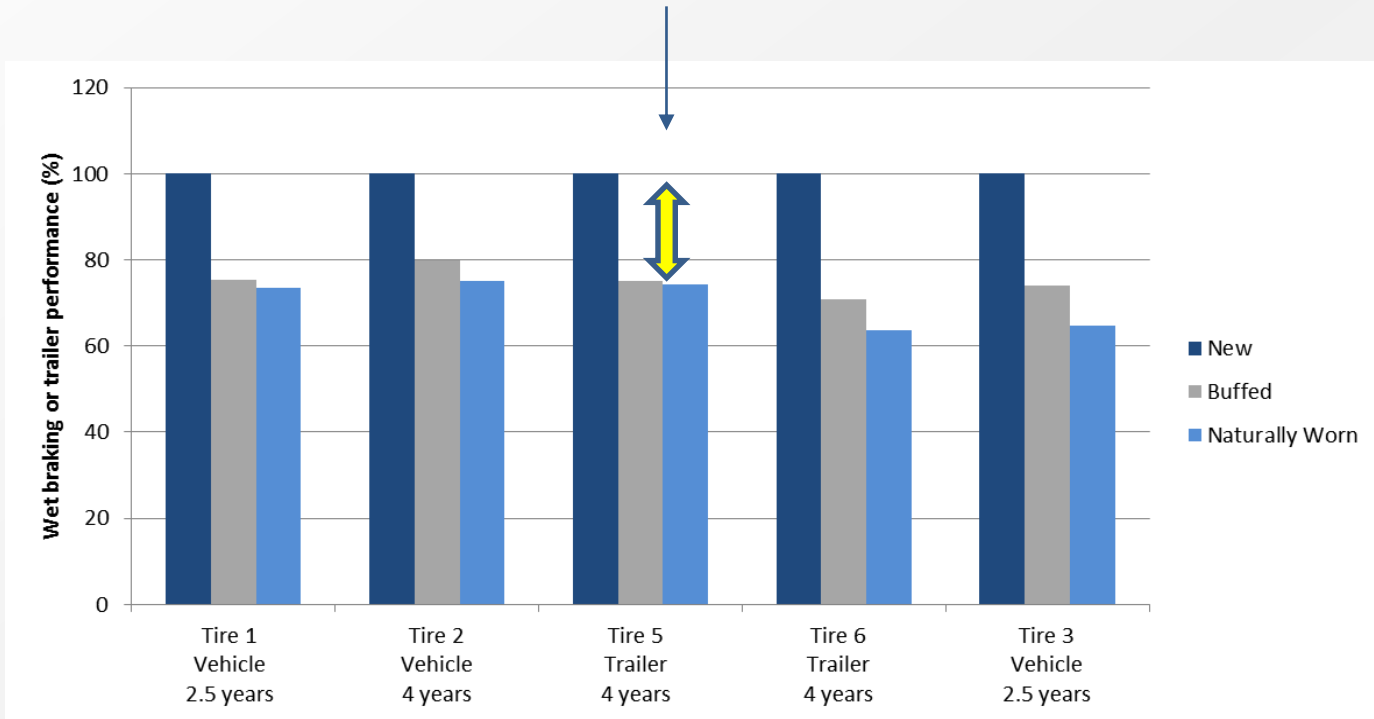
➤ 9 tyres tested

➤ New tyres state VS wear tyres profiles under 2 sizes.



Is this method representative of a natural wear?

Loss of braking performance of worn tire (buffed or naturally worn) versus new tire (%)

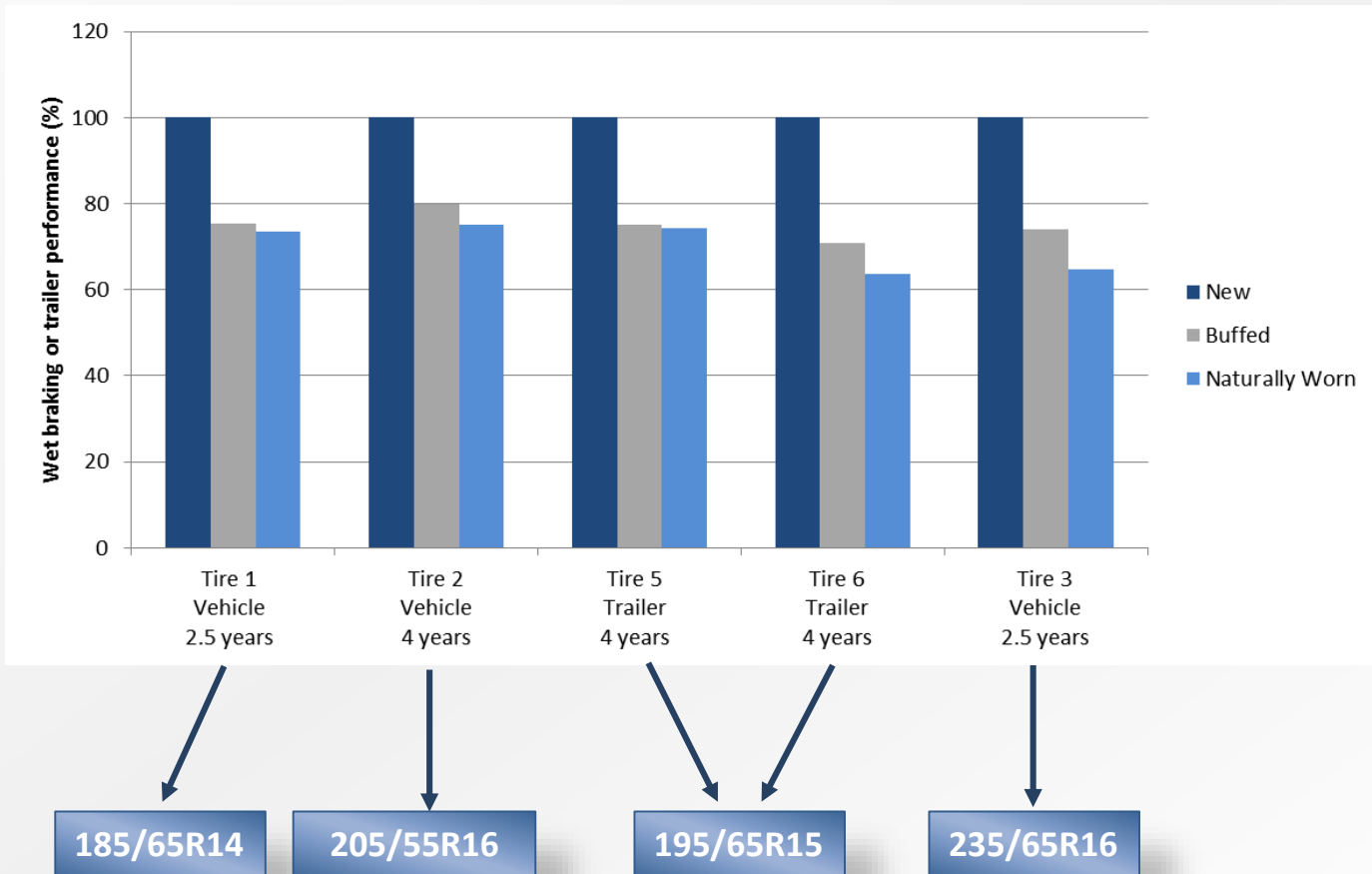


The buffed tyre performance is very close to the naturally worn tyre



Is this method representative of a natural wear ?

➤ Detailed with tyre size:



Life test Study: New tyres VS Worn tyres (France)

Program:

- 2 tyres sizes (2 vehicles),
- for each vehicles 2 tyres references (Premium & Quality)

3 steps :

- Tests according to R117 as New states (trailer method)
- Wear on vehicle for up to 20 000 km per tyres (total of 4 Tyres references)
- Tests according to R117 as « Worn states ». For WG 2 tests proceed:
 - Brand New ASTM16 & test with a worn ASTM16. (trailer method)

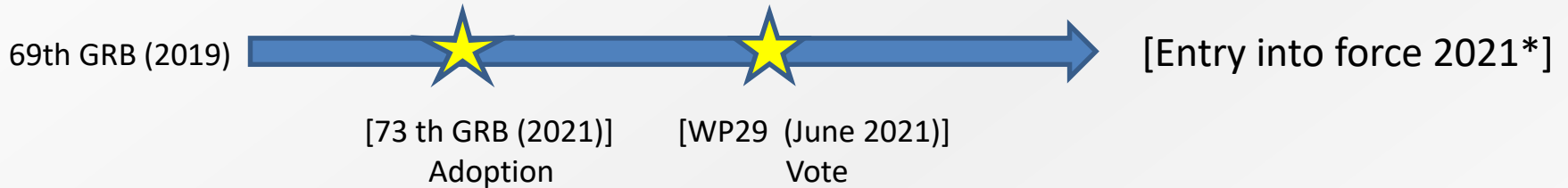
Study Schedule 2019



When could we apply the new amendment of regulation UN 117?

1. From the date of entry into force of the new amendment:

Voluntary application (upon the wish of the tire manufacturer):



2. Mandatory date for **new type of tyre** upon the request of CP's :

[1st September 2026*] – **European Safety Regulation : mid 2024**

3. Mandatory date for **new tyre** upon the request of CP's :

[1st September 2029*] – **European Safety Regulation : mid 2026**

* ECE/trans/wp29/grb/2009/6



Conclusions

1. The assessment of the wet grip performance on tyres in worn state is relevant.
2. The artificially buffing of the tread pattern for worn state is appropriate.
3. The UN 117 method used to evaluate the wet grip performance of new tyres can also be used for worn tyres. (compared to worn SRTT)
4. The same limits in term of level of relative performance can be used for both new and worn tyres.
5. The mandatory dates are proposed to apply those additional prescriptions.



THANK YOU FOR YOUR ATTENTION

