



Vehicle  
Certification  
Agency

# FADS-15 UK input



## Requirements for steering controls only intended for use under limited circumstances

- ▶ Vehicles which *only* have 'special' steering controls are out of scope of R79 following the recent amendments made by FADS.
  - ▶ Such vehicles will need to be brought back into scope as part of FADS Phase 2 work.
- ▶ At FADS-14 it was discussed that a subset of requirements from R79 might be applicable for steering controls that can only be used at low speed
- ▶ Need:
  - ▶ Definition of such controls
  - ▶ Technical limitations on their use
  - ▶ Requirements of R79 which should apply to such controls



# Initial ideas for discussion

*Add new paragraphs:*

[Option 1 – keep requirements outside definition]

2.3.1.1. “Restricted Steering Control” means a steering control not intended for use during normal operation (e.g. a control intended only for use during vehicle recovery, manoeuvring in a depot, periodic technical inspection, etc)

[Option 2 – align definition with current TF-AVC thinking]

2.3.1.1. “Restricted Steering Control” means a steering control intended for use during limited purposes at a speed not exceeding [6] km/h (e.g. a control intended only for use during vehicle recovery, manoeuvring in a depot, periodic technical inspection, etc)

5.1.1.1 If a vehicle is equipped with a Restricted Steering Control, the vehicle’s speed shall be limited to a maximum of [6] km/h whilst this control is being used. Restricted Steering Controls and their associated transmission are only required to comply with this regulation insofar as:

5.1.1.1.1 The direction of operation of the steering control shall correspond to the intended change of direction of the vehicle.

5.1.1.1.2 Paragraphs 5.1.5 and 5.1.11 and 5.3.1.3 shall apply.

For reference:  
5.1.5 = EMC  
5.1.11 = CEL  
5.3.1.3 = Failure warnings



## PTI provisions

- ▶ ADS should be able to perform any operation currently done by the ‘assistant’, e.g.:
  - ▶ Switching lights on and off
  - ▶ Pressurising the brake system
  - ▶ Applying and releasing the parking brake
  - ▶ Turning the steering from lock-to-lock
  - ▶ Sounding the horn
  - ▶ Placing the transmission in neutral
  - ▶ Running the engine at a specific RPM
  - ▶ ...
- ▶ If warning lamps are used to denote faults, it should be clear whether the illumination of a given lamp should constitute a test failure
- ▶ If electronic access to systems is needed (OBD), this should be standardised and it should somehow be clear whether a given fault constitutes a failure



## PTI provisions

- ▶ Amendments to UNRs could be simple or detailed.
- ▶ It may be challenging to define all the operations that may be needed to fulfil PTI requirements across Contracting Parties, so a simple option could be, for example:
  - 5.5.3. For vehicles without manual controls, a test mode shall be made available to fulfil the requirements of paragraphs 5.5.1 and 5.5.2., if necessary.*
- ▶ Simple approach → manufacturers would need to understand the PTI requirements in each country of deployment to ensure the system has suitable test modes
- ▶ Detailed approach → CPs would need to define all the test modes that they will require