



20 May 2020

## Proposal for selection of vehicles for Type 6 testing (ICE, NOVC-HEV, OVC-HEV)

### Annex 13 WLTP Low Temperature Type 6 test (optional annex)

- 2.6.2.3.2. Selection of vehicles for Type 6 testing
- 2.6.2.3.2.1. In the case that a Type 6 family includes bi-fuel or flex-fuel vehicles, at least one of these vehicles shall be selected for Type 6 testing. The selection shall be made in agreement between the manufacturer and the approval authority. The selected vehicle shall be tested on both types of reference fuel.
- 2.6.2.3.2.2. The manufacturer shall specify a value  $PMR_H$  (= highest power-to-mass ratio) and a value  $PMR_L$  (= lowest power-to-mass ratio) for all vehicle high ( $V_H$ ) and vehicle low ( $V_L$ ) of the interpolation families in a Type 6 family.
- Here the ‘power-to-mass-ratio’ corresponds to the ratio of the maximum net power of the internal combustion engine as declared by the manufacturer and of the reference mass, where “reference mass” means the mass of the vehicle in running order plus 25 kg.
- 2.6.2.3.2.2.1. In the case of Type 6 families consisting of ICE or NOVC-HEVs, a vehicle with a power to mass ratio greater than or equal to  $PMR_H$  and a vehicle with a power to mass ratio less than or equal to  $PMR_L$  (if applicable) shall be selected for testing.
- 2.6.2.3.2.2.2. In the case of a Type 6 family consisting of OVC-HEVs, the manufacturer shall specify at least one vehicle configuration representative for either  $PMR_H$  or  $PMR_L$ , whichever is expected to be the worst-case for criteria emissions, and ~~another the~~ vehicle configuration with the highest combined energy consumption, i.e. the highest combined cycle energy demand and energy consumption for heating, for the highest cycle energy demand calculated in accordance with paragraph 3.2.3.2.3. of Annex 7, which is expected to be the worst case for electric energy consumption. The selection shall be made in agreement between the manufacturer and the approval authority.
- 2.6.2.3.2.3. At least one vehicle for each transmission type (e.g. manual, automatic) installed in vehicles of the Type 6 family shall be selected for testing.

**Commented [TS.Nick1]:** Just clarification. If vehicle configuration for emission test has the highest cycle energy demand, one configuration test covers both emission and energy consumption test. Right?

**Commented [TB2R1]:** Correct, if the manufacturer provides evidence to prove this to the TAA.

2.6.2.3.2.4. At least one four-wheel drive vehicle (4x4 vehicle) shall be selected for testing if such vehicles are part of the T type 6 family.

2.6.2.3.2.5. For each internal combustion engine displacement of a vehicle within the T type 6 family at least one representative vehicle shall be tested.

2.6.2.3.2.6. Notwithstanding the provisions in points 2.6.2.2.1 to 2.6.2.2.5, at least the following number of interpolation families of a given T type 6 family shall be used to select vehicles for testing:

Number of interpolation families in a T type 6 family	Minimum number of interpolation families (N) used to select vehicles for T type 6 testing
1	1
from 2 to 4	2
from 5 to 7	3
from 8 to 10	4
from 11 to 49	$3 + 0.1 \times N^{(1)}$
more than 49	$0.15 \times N^{(1)}$

<sup>(1)</sup> Rounded to the next higher integer number