03-R41WG-05

GRB Informal Group: list of questions related to ISO/DIS362 (category L)

Response by ISO/TC22/SC22/WG16

Explain why engine speed and not Vmax was chosen for the equation in Paragraph 5.2
The question is not clear as there is no mention of engine speed and vmax in §5.2; additional clarification is being sought from GRB Inf Gr members
Provide the group with the distribution of urban, suburban, rural and motorway riding in the database
Original IMMA database for WMTC was complemented by additional data collected for WG16; subsequently the database was downsized to urban data only; v50, a95 and n/s95 vs PMR graphs are based on urban data only (see ISO/DIS362 (technical background annex); supporting presentation material outlining database distribution will be made available in time for the meeting)
Produce an explanation of the relationship between the engine revolutions in the database and those used in the test procedure
Engine speeds in database resulted in normalised engine speed vs PMR graph which was subsequently used to construct awot curve which determines gear selection (see ISO/DIS362 (technical background annex); see also WMTC Technical Report for analysis of normalised engine speed upshifts)
Provide a definition of pre-acceleration
See ISO/DIS 362 §3.12 (discussed/agreed during WG42 in Mesa, AZ)
Explain why L3 vehicles with PMR<= 25kW/t were excluded
L3 with PMR ≤ 25 kW/t are tested in accordance to §8.3.1.2. (see ISO/DIS362 (technical background annex); area is below intersection of aurban and awot curves so data dictates WOT test only)
Explain what would happen if the gear selected meant that the vehicle was un-driveable when conducting the WOT test
WG16 does not have any knowledge of such driveability problems but acknowledges that they are theoretically possible (notably for twin-cylinder); first of all the gear(s) has(ve) to achieve the prescribed acceleration and secondly pre-acceleration should be used to ensure stable acceleration
Explain the rationale behind use of a tolerance band of 10% instead of 5% for vehicles with manual transmissions
Already explained/presented to WG42 at earlier occasions (supporting presentation material will be made available in time for the meeting); 10% tolerance band represents compromise between test simplification and repeatability/accuracy (10% equates to maximum 0.5 dB difference between 1 gear and 2 gear test)
Comment on Germany's observation that in some cases, using pre-acceleration, the vehicles exceeded the target acceleration
Not clear what the problem of target acceleration exceedance is in case of pre-acceleration; additional clarification is being sought from GRB Inf Gr members

Clarify the concept of “auxiliary manual transmission” in the context of motorcycles
The concept is copied from category M; at present no motorcycle with such an auxiliary transmission is known to be in production
Provide the background to the paragraph 7.3 which allowed the reduction of the speed at PP' if 75% S was reached at exit point BB'
The justification for this upper threshold to vehicle speed as a percentage of vmax was explained/presented to WG42 at earlier occasions (supporting presentation material will be made available in time for the meeting)
Explain their approach for allowing the use of the highest gears (e.g. 5 & 6)
WG16 acknowledges that the simulation of the required acceleration rate and engine speeds can lead to high(er) gears in certain cases